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STRATEGIC DECISIONS ON THE INVESTMENT PROJECT

STRATEGICKÉ ROZHODOVÁNÍ O INVESTIČNÍM PROJEKTU

DIPLOMOVÁ PRÁCE

MASTER'S THESIS

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Pursuant to Act. No. 111/1998 Coll., on Higher Education Institutions, and in accordance with the Rules for Studies and Examinations of the Brno University of Technology an Dean's Directive on Realization of Bachelor and Master Degree Programs, the director of the Institute of is submitting you a master's thesis of the following title:

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In the Czech language:

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Instruction:

Introduction
Executive summary
Theoretical basis of the work
Problem analysis and current situation
Proposals and contribution of suggested solutions
Conclusions

Literature / Sources:

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Ing. Tomáš Meluzín, Ph.D. Director of the Institute	doc. RNDr. Anna Putnová, Ph.D., MBA Dean of the Faculty

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Anotace

Diplomová práce "Strategické rozhodování o investičním projektu Kasárna Slatina" je zaměřena na využití metod rozhodovací analýzy při řešení rozhodovacího problému v rámci revitalizace armádního brownfield Kasárna Slatina. V teoretické části je vysvětlena základní terminologie, metody a postupy, které se vztahují k problematice řešeného rozhodovacího problému. V praktické části je řešeno závažné strategické rozhodnutí spojené s otázkou rozvoje konkrétní brněnské lokality. Na základě použitých postupů je v souladu s rozhodovací metodikou navrženo optimální rozhodnutí.

Annotation

This diploma work "Strategic Decision Making on the Investment Project Military Barracks Slatina" is about the application of decision analysis methods for a solution to the decision problem of the revitalization of brownfield Military Barracks Slatina. In the theoretical part, the basic terminology, methods and procedures, related to problems of decision situations, are explained. In the practical part, the important strategic decision connected with the matter of a specific area of Brno's revitalization is solved. Through the application of these procedures, the optimal option for solution according to the decision methods is proposed.

Klíčová slova

Keywords

Česky	**English**
Manažerské rozhodování	Management decision-making
Vícekriteriální rozhodování	Multiple criteria decision making
Rozhodovací matice	Decision matrix
Varianty rešení	Criteria for choice
Proces rozhodování	Decision-making process
Metoda Fullerova trojúhelníku	The method of Fuller triangle
Bayesova věta	The Bayesian rule
Rozhodování za podmínek jistoty	Decision-making under certainty

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Declaration of originality

I Zuzana Žďárská hereby declare that this thesis is my own work and has not been submitted in any form for another degree or diploma at any university or other institute of tertiary education. Information derived from the published and unpublished work of others has been acknowledged in the text and a list of references is given in the bibliography.

Brno, 1st August 2010

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signature

Content

Introduction

The main objective of this thesis is the practical application of managerial decision theory in real problem of strategic decision-making. As a research property I have chosen the brownfield Military Barracks Slatina, which is perceived as a development area in city district of city of Brno. I will focus on decision and selection of the most appropriate future use of this area. Currently, there are several schemes of complex use processed by investors, who are interested in revitalization of Military Barracks Slatina. The main decision-making problem will be to determinate which of the mentioned above approaches is optimal. The theory of managerial-decision making will create the fundamental for optimal solution. The result of this thesis will be a decision, which will demonstrate the optimal solution to the problem.

The optimization of managerial decision-making is an area, which is currently establishing itself in many different procedures for dealing with each sub-operative decision and also the decisions of strategic importance. There are many processes and methods of solutions, offering new approaches and revising existing ones. The summary work of several authors published under the heading of Harvard Business School points out, e.g. that the decision affects, bounded awareness, temporal dissension between strategic planning and strategic decision, and various other aspects. These examples mentioned above are given particularly to demonstrate how broad range of problems is included in managerial decision.

In this diploma work, in order to preserve its clarity, we will focus only on the specific segment of problematic, which will help our resolution of a specific decision-making problem. It would not be useful or meaningful and realistic to try to conceive and take into account all of the different aspects and approaches, which exist in decision-making theory.

The main aim is to apply decision-making analysis methods to solve the decision problem of revitalization of the Military Barracks Slatina, concretely we will discuss the optimization of the concept, which is tendered by developers. The objective of this work is to select optimal investors concept, whose will carry out the revitalization of formal military area located in municipal quarter Slatina of city of Brno.

Theoretical part

As already indicated in introductory text, in the theoretical part of dissertation work we will focus on fundamental terminology, which is coherent with decision-making. First of all we will determinate the theoretical framework of methods and procedures which will be demonstrated in the practical part of dissertation work. The practical part will deal with solving the problem of revitalisation of military barracks Slatina. Fundamental chapter in theoretical part will be in chapter named 3. Decision-making process. In this chapter we will be presented with elements of decision-making process and firstly the particular phases of above mentioned process. Special chapter will be determinate for the evaluation phase of decision-making process, to achieve better lucidity in theoretical part of this dissertation work.

1. Introduction to decision-making

The purpose of decision-making as one of the sub-processes of management, is to choose the option that is the most beneficial to the project in the long term, be it in terms of utility, profits, etc. To talk about the decision, we must always choose between at least two variants, the subject of decisions generally means a product, process or the parts of one exact process (Bell et al., 1995). Since it is impossible to confidently predict the future, all our decisions are associated with some in-explicit degree of tolerance for any possible divergences from our planned intentions. These uncertainties are an object of risk management studies, which seek to control and optimize every possible negative divergence from our planned developments which should equalize as much as possible to the final end result. Cooke and Slack (1991) define project as temporary effort to create product or service. General management consists of many sub-processes (planning, leadership, monitoring, controlling, etc.), while risk management is an integral part. Just as in every project we operate, e.g. costs, time, quality and human resources, so we operate its risk.

According to Cochrane and Zeleny (1973) decision-making can be characterized as a choice between several variations of manners. The managerial level in decision-making

can be regarded as one of the key activities which managers implement and often even see as a core component of managerial processes. Decision-making is a very important element of operating management, in particular strategic decisions, their quality and results are fundamentally affecting the operation of almost every organizations. In our case, we will have the quality, outcome of the decision and a major impact on the further development of objective territory (Cooke and Slack, 1991).

So that we can speak about risk management, we must carry out certain activities and its integral part:

- planning of risk management
- risk identifying
- qualitative and quantitative risk analysis
- feedback on the results of risk analysis
- risk monitoring and controlling (Fotr et al., 2006)

2. Managerial decision-making

Unlike a personal decision, which tends to occur in the implementation of self-interest and the decision itself is realized by the decision maker, the managerial decision is one of those types of decision where it comes to fulfilling the interests of others and even the decision itself is not in desired hands but usually is administered by subordinate people (Blažek, 2004). Simultaneously this process is also characterized by low managerial decision-making level of determination, as the scope for decision-making remains generally very wide, which can cause problems in some situations (too much information, etc.).

According to Fotr et al. (2006) importance of the decision is especially evident in the fact that the quality and outcomes of these processes affect the basic way of operation and future prosperity of these organizations. Poor quality decision-making can induce one of the main causes of business failure. The importance of decision-making depends

on the extent resources (especially financial resources), which are bound to decision-making process. Fotr et al. (2006) reports that every day, organizations in Czech Republic decide about resources, whose amounts can reach values of one milliard CZK.

Shi et al. (2007) note that manager which removes only consequences of unfavourable circumstances in the moment when they occurred, has usually a higher cost than the person who implements risk management. Proactive approach to risk allows managers to avoid it or at least reduce its impact on the project, e.g. timely planned changes in project, project insurance, transfer the risk to the investor, etc.). The management of risk must always reckon with the cost we incur in its implementation, e.g. expenses on analysis, the subsequent redesigning of the project, etc. These mentioned costs allow us to have more control over the project's success. The main contribution of risk management is that this process offers the possibility of choice. We have a choice that we will implement risk management. These costs will rise but because of this we will be able to buy higher certainty of project success (Kavan, 2002), or we can decide not to implement risk management but when the project is completed we can find out that we bargained away more money than we would have if we decided to actively manage the risk. The investment decisions are usually looking for the answers to the questions whether the more expensive option should be chosen (Saaty, 1990).

Decisions for the revitalization of Military Barracks Slatina is based on the characteristics included in the managerial decision-making. The two fundamental assumptions are fulfilled - firstly the fulfilment of the interest of others (in our case "the others" are represented mainly by citizens of city Brno and all those who commute into the city Brno for work) and secondly the implementation of the decisions is in the hands of other people (most likely represented by developers, geodetic agencies, architects, construction companies, etc.).

2.1 Meritorious and formal logical aspects of decision-making

Since the managerial decisions are linked to the question of how to decide, which is connected to procedural site of the process, as well as who will decide and what it is that should be decided (link to the organizational site). It is profitable and convenient to observe and take into account both of these aspects of managerial decisions (Cooke and Slack, 1991).

According to Fotr et al. (2006) the managerial decision-making can be divided into meritorious site (material, contents) and formal-logical site (procedural). Meritorious site points out the diversity of decision-making process, which is primarily caused by different content of decisions, different characteristics of problems and objectives. On the other hand the formal-logical site connects the decision-making processes because it is a framework procedure, which is using explicit concepts. These mentioned concepts can be for different objective area identical.

In accordance with Grünig and Kühn (2005) these common features, their procedural, formal-logical and instrumental sites are objects of studying the theory of decision-making. Bell et al. (1995) states that the process can be divided only into the organizational and procedural aspects.

2.2 Organizational aspects of decision-making

To assess the appropriate functional of exact place respectively decision-making body for the decision is appropriate to assess its:

- information security
- qualifying premises
- interest orientation (Saaty, 1990)

The key success factor for functional process is hidden in a sufficient supply of quality essential information. Based on these factors the problems and circumstances surrounding the decision-making can be identified. It is also necessary to assume certain

levels of qualification for the processing and use of this information and finally the decision maker's own interests that may influence the decision both in a positive and negative way (Plamínek, 2008). According to the number of deciders the decision-making can be further divided into individual decision-making, where the subject of decision-making is the individual and collective, where a group of people is deciding and making choices (Carisson and Fullier, 1995).

The problem of object Military Barracks Slatina, which will be solved in the practical part of this dissertation work, meets the criteria to be embedded into matters of decision-making. Case of Military Barrack Slatina is a collective decision, in which two main subjects appear - namely the Czech Republic and City of Brno. These subjects are represented in this project by specific organizational departments. In the case of such fundamental decision-making problem we can expect sufficient quality of information security, quality premises and interest orientation.

2.3 The procedural aspects of decision-making

The procedural aspects of decision-making include structuring of decision-making process and application of statistical and mathematical methods. These specialized procedures listed above can be grouped under the term **decision analysis.** According to Plamínek (2008) decision analysis is defined as an approach to solving complex decision problems, which seeks for the combination of exact procedures and model tools with knowledge, experience and intuition of investigators, which will try to solve exact problems.

The practical application of methods mentioned above for a solution to the decision problem of the revitalization of brown-field Military Barracks Slatina is the main objective of this thesis.

3. Decision-making process

Saaty (2008) believes that decision-making process can be characterized as a process that is solving decision problem and includes at least two possible alternatives of solutions. On the other hand Dyer and Fishburn (1992) note that the decision-making process can be regarded as preparation, as well as act of decision itself because the act of decision can be under certain circumstances partly creation of instant moment, but the preparations typically takes much longer.

Under the term Decision- making process we understand process of solving decision problems, e.g. problems with more (at least two) options. It is assumed that the primary attribute of decision-making process is examining of various options and choosing the decision (that means optimal alternates so called options for implementing), then the problems with only one possible solutions are not part of decision-making problems and the theoretical framework of decision-making process will not be used to solve the problem (Cochrane and Zeleny, 1973).

According to Dluhošová (2008), the decision making process should make a distinction between generic conditions and unique situations. For the most part, many decisions are made as generic; i.e. you are facing a situation which is similar to another decision and you can therefore apply a set of rules and principles to the decision. A unique decision is not generic and thus you have no real guidelines to solve the problem. The biggest problem according to Dluhošová (2008) is that most managers try to force their generic type conditions into a unique situation. Peter Drucker also advocates the importance of feedback to make sure your decisions achieve their anticipated results.

Interdependent and follow-up activities that form the decision-making process can be decomposed into specific folders, which are called phases of these processes. The decision-making process can be divided into phases in several ways, either in detail (in case of larger partial components number) or in more aggregate way when the process is divided in relatively small number of stages (Bell et al., 1995). As an example of less detailed decompositions we can bring out the decision-making approach that distinguish the following four stages:

1. intelligence activity – includes the identification of the conditions causing the

necessity to decide, identification of decision problems and cause determining

2. design activity – aims at finding, creating, developing and analyzing of all possible activity trends

3. choice activity – includes an evaluation of activity trends proposed on previous phase and results in choosing alternate, which will be realized

4. review activity – is oriented on evaluation of analyzed results after realization and assessment in relation to predetermined objectives

Results of last phase mentioned above can cause and lead to other new decision-making process (Belton and Steward, 2003).

3.1 Decision-making problem

Saaty (1990) characterizes decision-making problem as a first phase of decision-making process and notes, that the solution for exact problem can't be approached before identification of this exact problem. Parmigiani (2009) objects and draws attention to the fact that the correct identification of the problem can not be done, until the awareness of the real situation is perceived - e.g. where we are, what is our desired state and what result should this action bring. The starting point for decision-making process is not determined by the identification of the problem, but by the definition of a goal. Fotr et al. (2006) delimits the existence of decision problems as a difference between desired state and actual stare. The desired state means the objective, which has to be achieved. The differentiation has to be worse than desirable state of course. The desired state can be also based on some past experience (e.g. level of raw material stocks, which proved good). In this case the differentiation leads to various problems, e.g. stock increase, high stuff turnover, an increase in certain cost items such as repair and maintenance, cost of handling complains of customers, etc.). The emergence of problems is indicated thus deviations form the actual existing state and that of the past, which is considered as satisfactory. In accordance with two approaches listed above the parts 5.1 and 5.2 are demonstration of creating decision problem and the objective, which we want to achieve.

Fotr et al. (2006) mentioned, that in many cases the desired values can be set by the plan itself, and often in a quantitative way. That means, in the form of certain parameters such as the planned production volume, the profit on equity return, etc. The deviation from planned values, discovered by the controlling process, identify the problems, which should be solved within the company. Some critical feedbacks (e.g. customer dissatisfaction, poor credit rating, etc.) can lead to identification of deviations from desired state.

Most of the problems mentioned above concern real and already existing problems, which however different in content, urgency and impact on business need to be solved. Fotr et al. (2006) defines specific problems such as potential problems that may arise in future. These problems depend, according to Fotr et al. (2006), on development of certain factors in business environment, which:

- can threaten the company (e.g. possible price increases of raw materials, energy, competition on exact market, etc.)
- can on the other hand bring the opportunities to the company (e.g. discovery of new production technology, war, etc.)

Fotr et al. (2006) note that awareness of these threats or opportunities and timely responses to them means preventing later problems that could threaten even the existence of the company itself.

Plamínek (2008) sees problems in defining a risk mainly in so-called " Definition traps" of problem definition. "Definition trap" is a serious error in defining the problem and it can complicate the subsequent steps or even forbid them. The first error is wildcard problem solving. He referred, that the problem is solved at the level of its symptoms, not causes. He also compares this procedure to toothache, which we will try to heal only with painkillers. Furthermore, Plamínek says we can try to solve the problem by robbing Peter to pay Paul – we are moving the problem from one place to another with no sign of active solution.

Plamínek (2008) advices to look for the roots of problems rather than their appearances. It is necessary, metaphorically speaking, instead of taking painkillers to remove the

inflammation that causes the toothache. He goes on to point out that if too much attention is paid to unimportant peripheral issues, which do little or nothing to help the system and the key issues are relatively ignored.

3.2 Elements of decision-making process

The basic elements of the decision process are according to Fotr et al. (2006) the deciding aims, evaluation criteria, subject and object of decision, alternatives of decision and their consequences, statements of the world.

3.2.1 The objective of decision-making

Dluhošová (2008) states that objective of decision-making process is a desirable state, which should be achieved and its proper determination is the key success factor of the decision-making process. In the case of more complex decision tasks can we meet with multiple objectives, which are connected in certain mutual relations whether they are hierarchical or equivalent. The hierarchical relations are based on the objectives of) their mutual hierarchy. On the other hand the equivalent relations can have the objectives - mutually complementary, competing or neutral (Bell et al., 1995). In our case there can be found relationships between the sub-goals both complementary and competitive. Hierarchy of objectives and relationships between them are shown on the practical part of this thesis in section 5.2.

3.2.2 The evaluation criteria

Evaluation criteria are certain aspect on which the decision maker assesses the desirability of different alternatives in terms of fulfilling defined goals Evaluation criteria are usually derived from the set objectives of solution, and therefore there is a close relation between them (Grünig and Kühn, 2005).

Objectives are usually stated as:

- maximization, in other words increases (e.g. profit, profitability)
- minimization, in other words reducing (e.g. costs and losses from low quality

production, etc.)

Often, the degree of goal realization is assessed through using multiple criteria (which are, in this case for example noise, exhalation or preference of commercial zones, etc.).

Applying the evaluation criteria in the assessment of the advantages of exact alternate of decision-making requires some differences conceived criteria. It is necessary to distinguished criteria with numerical values, so-called quantitative criteria from the qualitative ones that are set out in a verbal way (Parmigiani, 2009; Ranyard et al., 2001).

Advantages of quantitative criteria can be:

- clear content (in economic decision-making is usually the index criteria type with precisely defined relations for calculating these indicators)
- clearly interpretation for decider
- easy measurability (Dluhošová, 2008)

Quantitative criteria can be divided into two groups:

- first group consists of income criteria type, in which decision maker prefers lower values (criteria of "the more the better", e.g. profit)
- second group of criteria constitute the criteria of cost-type, in which the decision maker prefers lower levels from higher (the criteria of the type "the more the worse", e.g. cost)

Qualitative criteria are usually aggregated with broader criteria contents. In the group of criteria belong this criteria listed as follows - impact on environment, criteria of social and political characters, etc.).

Furthermore, the criteria can be distinguished according to the nature of the expression level of target to meet criteria for qualitative or quantitative nature. In our work we meet all the criteria described types (Saaty, 1990; Fotr et al., 2004).

3.2.3 Decision-making subject

Decision-making subject is called the subject, which chooses variant designed to implement and can be realized by individuals or group, as has been stated above in the text. If decision maker is an individual, we are talking about individual decision-making body, unlike the collective body of decision where the decision maker is a group of people. Selecting of the alternate intended to implementation is a result of exact procedure based on collective voting. Decision-making with individual subject can largely depend on how the other members of the organizational units were involved in preparing decisions (Zeleny, 1998).

In practice it is necessary to distinguish between:

- statutory decision maker, e.g. subject which is equipped with power to select alternates for implementing and simultaneously bear the responsibility for impacts and effects on chosen alternatives
- real decision maker, e.g. subject that actually decides (Zeleny, 1998)

Decision-making subject will be likely in the case of revitalization of Military Barracks Slatina the Czech Republic itself with cooperation with the city Brno, represented by competent authorities.

3.2.4 Object of decision-making

Under the term object of decision-making we can imagine the area, which is related to decision-making process (Fotr et al, 2006). The object of decision-making is in this case the development area of Military Barracks Slatina, respectively revitalization of this area. The alternatives of problem are closely connected with objects of decision-making.

3.2.5 Decision-making alternatives

The alternative of decision-making represents a possible method of decider's actions, which leads to fulfilment of determinate objectives. In practical part we will present in more detail way three possible alternatives, which lead to achieve determinate objectives thus revitalization of the problematical area (Shi et al., 2007).

The consequences of alternates are always expressed relative to each evaluation criteria:

- in case of quantitative evaluation criteria we use the weight of the criteria and the impact of alternates in relation to this criterion
- the criteria of a qualitative character, where the consequences of the options are expressed by a verbal description, has no sense of value criteria, and hence we use a result of alternates to the specific evaluation criteria (Blažek, 2004)

According to Fotr et al. (2006) the alternates of decision-making are closely linked to their consequences, which represent the intended effects or so-called alternates effects on object decision (e.g. production plan, effectiveness criteria, etc.), to its surroundings (e.g. environment, law, etc.).

3.2.6 Aspects of surrogates

We can apprehend aspects of surrogates as mutually exclusive situations in future, which are affected by consequences of variations in relation to certain criteria. In our case the aspects of surrogates are influenced by financial cost of the project and because of this situation the practical part tenders more detailed analysis of accessibility of financial resources or funds and its impact on the quality of realization of appropriate decision-making varieties (Plamínek, 2008).

3.3 Classification of decision-making problems

Fotr et al. (2006) claims that decision-making problems can be divided into well and poorly structured in terms of their complexity and algorithms.

3.3.1 Well-structured decision-making problems

Well-structured decision-making problems are usually characterized by the existence of routine practice solutions and quantification of variables. For well-structured problems there are characteristics that variables which occur can be quantified as a mixture and usually have only one quantitative criteria of evaluation (Fotr et al., 2006). As an example of well-structured problems can we mention decisions about assembly line

usage, determining of order size, etc. These include especially the problems addressed in the operational level.

3.3.2 Poorly-structured decision-making problems

The structured decision-making problems are, as Carisson and Fullier (1995) point out, on the other hand analyzed at higher management levels. These problems have a unique nature and character that require a creative approach and experience and there are no standard solutions for these problems.

Poorly- structured decision-making problems is typical:

- existence of a larger number of factor which might influence problem solution (both inside the company, where the problem is solved in its surroundings); some of these factors are not known precisely, only a part is quantifiable and there are complicated or changeable structures between factors
- random changes in some elements in the surroundings where the problem solving is in progress (e.g. random change of technological, economical, ecological and social surroundings)
- existence of larger criteria number for alternatives evaluation and some of them have a qualitative character
- difficult information interpreting, which is needed for decision (Zeleny, 1998)

Based on mentioned above characteristics the decision-making problem which is the main topic of practical part of this thesis we can say that decision problem of Military Barracks Slatina can be classed into poorly-structured problems because it fulfils all above listed features.

3.4 Quality of decision-making

According to Fotr et al. (2006) the quality (rationality) of decision with important practical implications is one of the fundamental concepts of decision-making theory. Without the exact clarification of this problem is difficult to increase its efforts in

organizations. In practice there is tendency to review the quality of decision-making through the really achieved results by the implementation of the selected alternate. Very often it is spoken about good or right and successful decision in case that the results are good enough and satisfactory for the decider. Even through Fotr et al. (2006) cannot challenge the fact that high-quality decision-making must be reflected in the long-term good economic results. The quality of decision-making process cannot be criticized only on one result of decision-making process.

It is not appropriate to judge the quality of decision-making only on results of various decision-making processes, but also according to exact characteristics of decision-making process so that the good quality decision-making leads from long-term point of view to improving economic performance and on the other hand the low quality decision-making brings worse results.

The quality of decision-making process is from perspective of Fort et al. (2006) influenced as follows:

- determination of goals, decision-making problematic and level of their compliance with the purpose and value system of organizational unit, in which the decision-making takes place
- quantity and quality of information, which will be used for decision-making and problem solving
- degree of decision-making theory and tools application
- quality of project
- conceptual distinction
- quality of decision-making solutions

The above mentioned characteristics can be used as a fundamental for establishing quality requirements and quality evaluating of decision-making processes, which have already been proceeded.

3.5 Information importance

As Fotr et al. (2006) indicate, information plays key role in decision-making. This notion is supported by the fact that the decision-making process is perceived as the acquisition and transformation of input information into output information, including the interpretation of such information. A decision-maker plays an important role in the processes of collecting information, his/her knowledge, experience and reasoning are needed for:

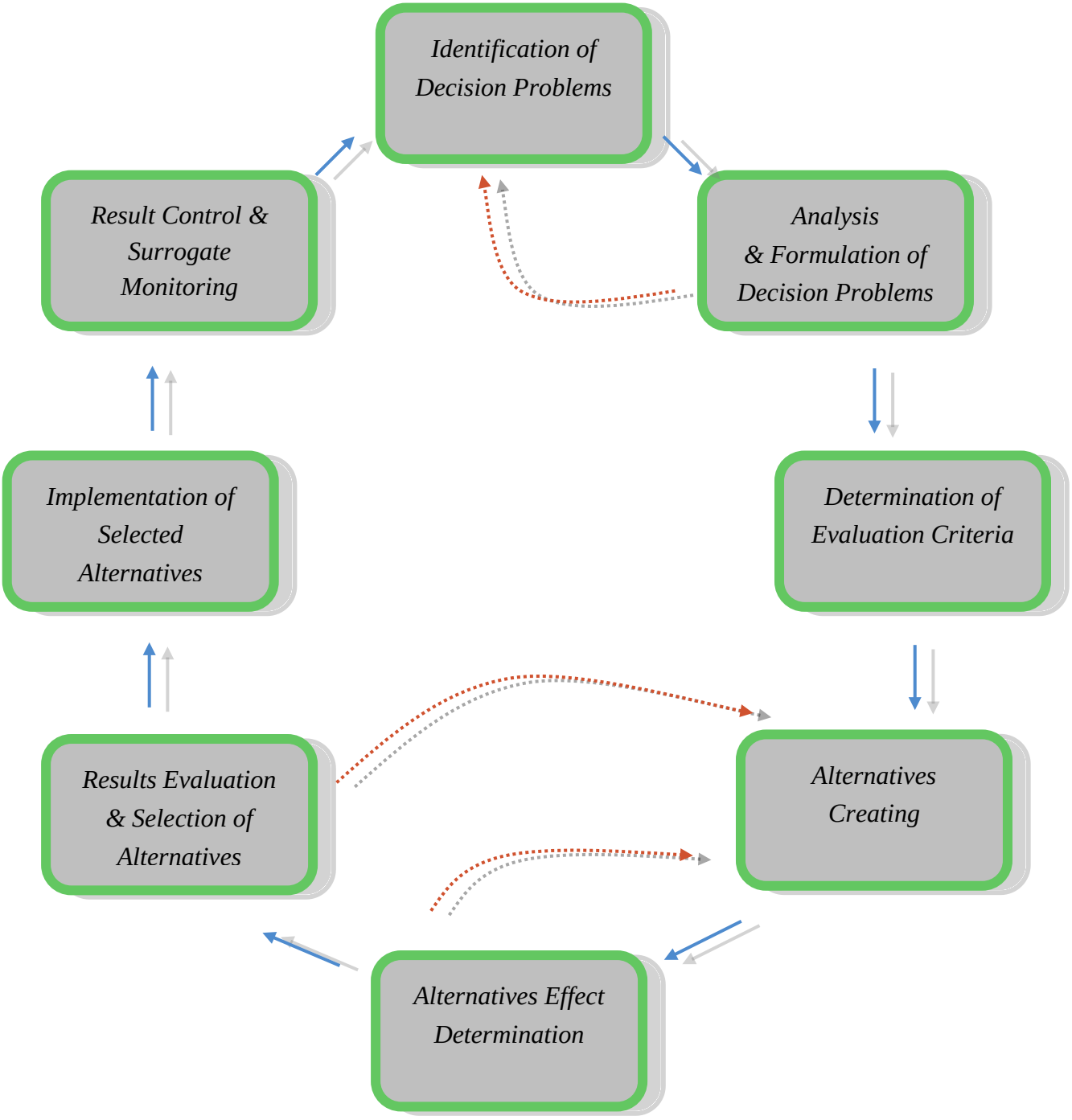
- ensuring of efficient information collecting
- determining the appropriate amount of information
- correct interpretation

The efficiency of information collecting for solving decision problems is as Fotr et al. (2006) points out threatened by certain efficiencies, which can lead to irrelevant data gaining. These data can be irrelevant to the decision problem and can be incorrect and ambiguous or even conflicting.

3.6 Stages of decision-making process

Decision-making process is divided into six phases, which consists of two basic groups. The first group, assumes divergent thinking and growing volume of information and spreading ideas. This group includes phases of Definition, Analyzing and Generating. Next group of stages involves the convergent thinking characterized by narrowing and selecting. Methods appertain to this mentioned group are Classification, Evaluation and Decision (Ranyard et al., 2001).

Picture no. 1: Cyclical character of decision-making process



Source: Fotr, 2006. Edited by author.

Fotr et al. (2006) note that in some cases the decision-making process has only the first six stages, starting with the identification of decision problems and ending with the evaluation of the consequences of possible choices and selecting exact alternate for implementation. The choice of alternate for implementation is then considered as the final stage of decision-making process. Fotr et al. (2006) defines preparation of the decision as summary of all the stages. This allows us to process information, which enables the decision and refers to the following stages. The implementation phase is then considered as a separate process with its characteristic features arising from actual implementation. These features differ the phase significantly from the mindset of decision-making process. The control procedure of achieved results of alternate implementation is a part of controlling processes.

The pattern of decision-making mentioned above is sometimes called Analytical models of decision-making. It is obvious that solutions of some decision-making problems proceed in logical sequences of stages of the analytical model. For certain decision-making processes, especially decision-making processes in organizations, it is often somewhat typical intuitive than analytical approach to solving decision-making problems. The main accent is not only on the best options to choose from the obtained set of alternates, but rather how these different options fit in personal objectives and plans of the organization. The best solution for one will not be the best solution for another (Grünig and Kühn, 2005). Representative of this approach, which is less analytical, more likely intuitive and more widely automated way of addressing and the deciding is called Image theory. This theory deals mainly with decisions regarding the choice of a broad framework for action (e.g. the company should develop a new type of product), or changes to the current focus of activities (e.g. the company should stop production of certain products).

In this diploma work the analytical method will be used, because the intention is to select the project of revitalization Military Barracks Slatina, which will bring the highest benefit to the investor, but also the original owner city of Brno. The theoretical framework of intuitive and automatic methods of decision-making, problem solving can be partly used in the decision-making.

3.6.1 Defining

In the phase called Defining, as the name states, comes the definition of objectives, if the objective is generally not given or is intended by external environment, e.g. by command of supervisor, law, ordinance, etc.). Properly formulated objectives should be ambitious enough to be able to maximize the use of available resources, but should be based on realistic judgments to avoid possible situations of failure (Fotr et al., 2006). The output of this phase is to define targets that have to be achieved or problems that have to be solved. The practical part of this work is based on this theory and sets up problems but also solutions, which in result should be achieved (Plamínek, 2008).

3.6.2 Analyzing

In the analysis phase comes the collection of information and subsequent analysis of this collected information, which in turn can be used to create quality decisions. In this context Zeleny (1998) believes that the common practice intuitively leads to a specific idea how to decide, but this perception is not supported by sufficient analysis of useful information. In the decision-making process information plays a key role, it is absolutely necessary to gather and correctly evaluate such information. The output of the phase Analyzing is a set of relevant information, including their interpretation. In the practical part we will first introduce problematic areas, make its geographical determination, outline the ownership in relation to real properties and describe their current usage (Dyer and Fishburn, 19992).

3.6.3 Generating

In the generation phase we search for different options that lead to the realization of defined objectives or to the figuring out of the defined problem. This searching is based on obtained information. The purpose of this phase is to find the widest variety of different scenarios using different techniques and methods, e.g. morphological analysis a brainstorming (Fotr et al., 2006). The output of this phase of decision-making process is to gain enough ideas and themes to achieve defined goal or solve the problem (Plamínek, 2008). The basic comparison of possible alternatives in terms of benefits, disadvantages and shortages will be created in the practical part in the chapter number seven named Generating.

3.6.4 Evaluation

The evaluation of possible alternates is at the heart of decision-making process. Its purpose is to assess the various alternates according to criteria (Fotr et al., 2006).

The set of criteria should meet the following requirements:

- entirety
- measurability
- un-redundancy
- minimum range (Cooke and Slack, 1991)

Outcome of the evaluation phase can be:

- determining of the most effective (or optimal) alternate
- determining of so-called preferential alternates arrangement, e.g. alternates line up according to the total benefit whereas realized may be (this depends on source restriction) several alternates on the first places of arrangement (Cooke and Slack, 1991)

Evaluation phase is really extensive and as the pivotal phase of decision-making process we will devote to this topic the following separate chapter.

3.6.5 Implementation and verification activities

Implementation of chosen alternative represents practical implementation of decisions, e.g. building a new production line, realization of a project with selected partner, etc.

Verification activities are checking results of realized alternates. Verification activities compare defined variations of actually achieved objectives with expected results of solution. If there exists significant deviation is necessary to prepare and implement reparation (corrective) actions. If the objective prove itself as unrealistic, it is necessary to correct it. Stage of verification activities should include monitoring of surrogates and not only in terms of the impact of changes on realized alternate but also search for signals, which indicates the emergence of new problems (Fotr et al., 2006).

4. Evaluation

Evaluation is the penultimate stage of the decision-making process that precedes the final decision. In this phase it is necessary to put various alternatives through the evaluation by using various decision-making techniques and rules of decision analysis, e.g. decision matrix (Bammer and Smithson, 2008).

The probability of surroundings stages differentiates three decision situations:

- decision-making in terms of certainty
- decision-making in terms of risk
- decision-making under uncertainty (Blažek, 2004)

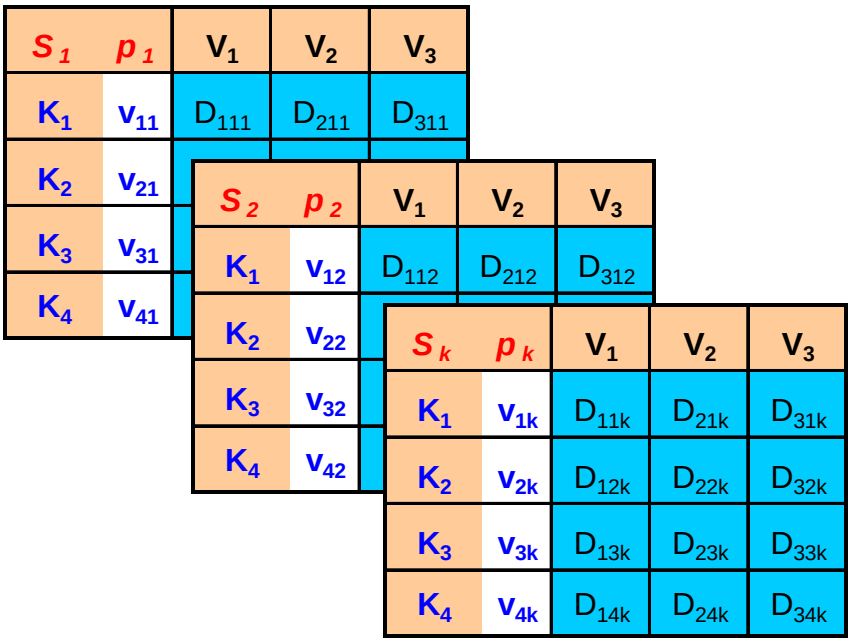
In our case, we will use in practical part the method of multiple criteria decision-making in terms of certainty to solve the problem. This is the reason why we will pay more attention in theoretical part to the above mentioned problematic.

4.1 Decision-making under risk

Belton and Steward (2003) believe that multiple criteria decision-making under risk is the best way to use in cases where there are more states in the observation area, we know their full variety and the probability occurrence of single states is known and quantifiable. By using above linked method we come out from decision matrix used for multiple criteria under conditions of risk, which is shown on the following picture.

Number of decision-making matrix corresponds to the number of surrogate states that may occur (k). Each state of surrogate is responsible for the conditions surrounding the risk and the likelihood with which such situations do occur (pk). Decision-making matrix for the surrogate states has specified criteria Ki in headrow, this reaches different values for different surrogates states. The columns of headings are providing alternatives Vj, which are all the same in every column.

Picture no. 2: The general form of decision matrix for multi-criteria under conditions of risk



Sources: Blažek, 2004.

To resolve the decision problem under these conditions Blažek (2004) illustrates exact procedure and the whole process is carried out as follows:

1. each of the matrices will be put through decision-making procedures in terms of security (we will rate particular alternates for particular criteria with the help of basic alternate, make weight evaluation criteria, multiply the evaluation of exact alternates with weight of criteria and make row sum)

2. final acquired valuations for particular surrogates stages will be written in general matrix of simple criteria decisions

3. application of Bayesian rule

4.2 Decision-making under certainty

Decision-making in terms of certainty comes into play in a case where there is only one state of surroundings is in discussed area and the probability of its occurrence is one

hundred percent. The decision-making in terms of certainty is related and based on general form of decision matrix for terms of certainty (Fotr et al., 2006).

Picture no. 3: The general form of decision matrix under certainty

		V_1	V_2	…..	V_j	…..	V_n
K_1	v_1	D_{11}	D_{12}	…..	D_{1j}	…..	D_{1n}
K_2	v_2	D_{21}	D_{22}	…..	D_{2j}	…..	D_{2n}
…..	…..	…..	…..	…..	…..	…..	…..
K_i	v_i	D_{i1}	D_{i2}	…..	D_{ij}	…..	D_{in}
…..	…..	…..	…..	…..	…..	…..	…..
K_m	v_m	D_{m1}	D_{m2}	…..	D_{mj}	…..	D_{mn}

Source: Blažek, 2004.

In the head row of above linked matrix are the criteria K_j with weight v_i, in the column headers of individual alternatives of solution V_j. Individual matrix elements D_{ij} constitute partial benefit of V_j option to meet the objective according to criteria K_i as a single surrounding state S.

4.3 Evaluation of alternatives according to various criteria using Basic method options

Within the frame of this step we have to convert different units of quantitative and qualitative nature to a common denominator, so we provide comparability of the effects resulting from individual variants. The numerical and verbal evaluations of alternates by various criteria are replaced with point values (Blažek, 2004).

The method is based on determination of partial rating of alternates in relation to each criteria, by comparing the values of the consequences to each variant with the values of so-called basic variants. The basic variant is in our case seen as a variant that achieves

the best value of criteria from existent set of alternates (Fotr et al., 2006).

The partial evaluation of alternatives consults the criteria of return is determinate as follows h = $\frac{xi}{xb}$, where *xi* represents partial evaluation of alternatives according to appropriate criteria and *xb* represents partial evaluation of basic method. Partial evaluation of alternatives, given the criteria we set the cost under a similar type of relationship (Blažek, 2004).

4.4 Weight evaluation criteria

Generally we cannot assume that the criteria are equally important and therefore we qualify their importance with determination of varied types of weights. Bammer and Smithson (2008) recommend designate numeral values of criteria weights so that the total sum of weights for all criteria is equal one.

In determining the weights of individual criteria we can use the methods listed below:

- direct method (expert) evaluation
- method of paired comparison

In our case, criteria weight evaluation results from materials form, which have been filled out by several experts from different fields of expertise.

Fotr et al. (2006) states, “most multi-criteria methods of evaluation options require the weighting of evaluation criteria. These weights reflect the importance of numerical criteria”. This idea is based on the assumption that not all criteria, let us say objectives in view, are of equal importance to the decision maker. Some criteria may be more important and can have more significant effect, while others may have the contrary nature of subordination, inferiority, etc. The more decision maker perceives the criteria significantly, the higher the weight of the criteria. In this context Kavan (2002) refers to the several methods for determining the criteria significance that allows distinguishing of numerical importance of different aspect of evaluation. They include, for example, method of ranking, grading method and the method of matching pairs in the triangle.

In the practical part of the thesis we will pay particular attention to the last mentioned method called Comparing in triangle of pairs which can be found in other management literature resources under the name of Fuller method or The method of Fuller triangle. For the importance of this theory to our topic we will now describe this method in detail.

4.5 The method of Fuller triangle

The method of Fuller triangle comes in advantage of other methods with one major asset – that there is a possibility to compare only two criteria among themselves. Unlike some methods, in which experts are forced to make comparisons in relation to other criteria – e.g. dividing of a number of points between the various criteria in accordance with their significance. When using "The method of Fuller triangle" the expert has to choose and opt for one of two possible criteria. This gives the advantage of choosing the "right" criteria, which is in comparison with the other one more significant. Kavan (2002) highlights that the method also ensures that there was a comparison of all the criteria of reciprocal pairs. Using of this method makes the decision-making smoother, simpler and objectifies defined significance.

The whole procedure by Kavan (2002) consists in creating of triangular pair table, which consists of a combination of criteria in such a way that each double line will gradually come to match the criteria, which refers to the number of double line with the following criteria in the row. So in the first double line we will test number 1 with following number of criteria in successive steps with numbers 2, 3, 4, 5 to *m*. In second double line we will pair criterion number 2 stepwise with number of criteria 3, 4, 5 to *m* and in this manner progressively for all *(m-1)* double lines. From description mentioned above is obvious that in each subsequent double line matches always one incrementing number and therefore the number of pairs is less than that in previous double line. This generates less pairs in each subsequent double line and the resulting form creates a triangular shape.

In the following table the expert is selecting in each resulting squares the criterion to which he predicates a higher value compared with the second criterion in the relevant

square. If it was not possible to choose one of two criteria the more important one, in other word if the expert considered the criteria to be equally significant or he could not make a qualified choice between these two criteria, then he may mark both of them.

Next step is the evaluation of the table in the way that each criterion is evaluated point-wise and their sequence is determined consequently. That means that in scope of the entire table comes to assignation of how many times and which criterion has been chosen (one choice is equate to one point). The sum of these options is written down in the exact column of the table. The numbers of circlets written next to the chosen criteria creates always the first double line of the table. In case that will happen the above linked situation – that the expert can not decide which criteria within the square is more important and significant to him then each of these criteria will receive only 0.5 points. Next step of this method is determination of the criteria ranking as follows – in the column called Criteria ranking are the criteria rated in ascending order according to number of circlets, i.e. the criterion which received the most points in the expert classification, that means it was often chosen from two possible options and obtained 1st place in order and like this (Kavan, 2002).

Although the method can be used in case that there is only one expert, a much objective approach gives results when we collect results and opinions from more experts. Each of the experts will receive prepared form of triangle table. The results of experts will be analyzed, interpreted and subsequently entered in the summary table, which is the output for each criterion so called - point value of importance (PVI). Point value of importance reflects the average number of points assigned to each criterion and is calculated as the total number of points assigned divided by the total number of experts (Kavan 2002).

Now for clarity the above mentioned verbal description will be demonstrated on a trivial example. Consider $m = 6$ criteria, which will be denoted $j = 1, 2, 3, 4, 5$ and 6. Furthermore consider $p = 5$ experts. Now we will prepare for each expert one form, which consists of pairs of triangular table and contains a combination of pairs (criteria). The number of combinations of pairs is expressed by the relation $k = \frac{m(m-1)}{2}$, in our case $k = \frac{6(6-1)}{2} = 15$ combinations of results (Kavan, 2002).

Table no. 1 represents the completed form of the first expert, including the determining of circlet number and criteria ranking.

Table no. 1: Form for expert

Criteria (j)					Number of circlets	Criteria ranking
(1)	1	**(1)**	**(1)**	1	*3*	**2.**
2	**(3)**	4	5	**(6)**		
	2	**(2)**	2	2	*1*	**5.**
	(3)	4	**(5)**	**(6)**		
		(3)	3	**(3)**	*4*	**1.**
		4	**(5)**	6		
			4	**(4)**	*1*	**6.**
			(5)	6		
				5	*3*	**3.**
				(6)	*3*	**4.**
				SUM	*15*	

Source: Kavan, 2002.

The next step is creating of a table in which we express the prevailing opinions of all experts. This table summarizes the enunciation of filled forms and its output is already above mentioned point value of importance.

Table no. 2: The method of Fuller triangle

Criteria (j)		Experts (i)						
		1	2	3	4	5	SUM	**PVI**
1	**Circlets number**	3	3	3	1	3	13	**1.63**
	Ranking n_{1i}	2	1	2	6	2	13	
2	**Circlets number**	1	2	4	3	2	12	**1.50**

	Ranking n_{2i}	5	4	1	2	3	15	
3	**Circlets number**	4	3	2	2	2	13	**1.63**
	Ranking n_{3i}	1	2	4	4	4	15	
4	**Circlets number**	1	2	3	4	2	12	**1.50**
	Ranking n_{4i}	6	5	3	1	5	20	
5	**Circlets number**	3	3	2	2	2	12	**1.50**
	Ranking n_{5i}	3	3	5	5	6	22	
6	**Circlets number**	3	2	1	3	4	13	**1.63**
	Ranking n_{6i}	4	6	6	3	1	20	

Source: Kavan, 2002.

In this step we proceed to multiplication of the recognized fragmentation benefits of identified variants with weights of criteria, so we get variants of the weighed partial evaluation. Followed by the sum of weighed partial evaluation, we will get a total valuation of alternates. This process is same for each surroundings state. After implementation of the above linked process we have received for each variant in the state surroundings its total compensation package. The results will be written in the decision matrix for decision-making under conditions of risk that we have presented above.

4.5.1 Multiplication of alternate evaluation with weight of criteria and implementation of line sum

This method describes multiplication of a point evaluation of particular alternates of weight criteria. Subsequent sum of rows of decision matrix would express the calculation of effectiveness of various alternates for the surroundings state (Belton and Steward, 2003).

4.5.2 Conscription of the total evaluation of alternates obtained for particular surroundings states into the general matrix under conditions of risk

The general form of the matrix mentioned above is as follows:

Picture no. 4: The general form decision-making matrix under conditions of risk

		V_1	V_2	.....	Vj	.....	V_n
S1	p_1	C_{11}	C_{12}	.....	C_{1j}	.....	C_{1n}
S2	p_2	C_{21}	C_{22}	.....	C_{2j}	.....	C_{2n}
.....	.....	.....	.....	.....	.....	.....	.....
Si	p_i	C_{i1}	C_{i2}	.....	C_{ij}	.....	C_{in}
.....	.....	.....	.....	.....	.....	.....	.....
Sm	p_m	C_{m1}	C_{m2}	.....	C_{mj}	.....	C_{mn}

Sources: Blažek, 2004.

In the rows of matrix are surroundings states S_i with probability appearance p_i and in the column headers there are written alternates V_i. Particular matrix components are C_{ij} representing benefits of alternate V_j for achieving the objective under existence of the surrounding state S_i.

4.6 Application of Bayesian rule

To select optimal alternate for decision-making under condition of risk we use Bayesian rule. According to Bayesian rule the optimal alternate is the one, where the sum of incremental benefits reaches the highest values. Bayesian rule is a theorem of probability, which shows the relation between one conditional probability and its inverse, e.g. the probability of a hypothesis given observed evidence and the probability of that evidence given the hypothesis (Blažek, 2004).

The Bayesian rule is defined on the following row and explained on the next page.

$$P(A|B) = \frac{P(B|A)\,P(A)}{P(B)},$$

Each term in Bayesian rule has a conventional name:

- *P(A)* is the prior or marginal probability of *A*. That means that information about B is not taken into account
- *P(A|B)* represents the conditional probability of *A*, given *B*. It is derived from or depends upon the specified value of *B*
- *P(B|A)* is the conditional probability of *B* given *A*
- *P(B)* is the prior or marginal of *B*

The Bayesian rule in this form gives a mathematical representation of how the conditional probability of event *A* given *B* is related to the converse conditional probability of *B* given *A.* The key idea is that the probability of event A given event B depends not only on the relationship between A and B but on the absolute probability of A independent of B and the absolute probability of B independent of A.

The application of Bayesian rule consist by Blažek (2004) of following steps:

1. multiplying each element of the matrix with appearance probability of appropriate surrounding state
2. summarizing the values of rows in each column for each alternate
3. selection of the alternate whose summarizing values reached the highest value

Practical part

As stated in the introduction of this diploma work, in the practical part we will apply theoretical methods and procedures of decision-making process in practice, which we introduced in the previous theoretical chapter. The theoretical framework will be applied on creation of optimal concept of the investor's selection for the construction in the area of Military Barracks Slatina in the city of Brno.

In the practical part, we will proceed in accordance with the division of the decision-making process at its various stages, as stated in paragraph three of the theoretical part. Firstly in the stage of defining we will determine the problem that we want to solve and in our thoughtful goals, we want to achieve by solving the problem. In the following chapter - Phase of analyzing, we will focus our attention on geographical boundaries of the discussed area, ownership of the property and structure of the territory according to the current zoning plan for the city of Brno. Subsequently in this stage of decision-making process we will outline the current area usage and introduce the possible investors who wish to enter the territory and realize their entrepreneurial prospectus, including investors bids and the conditions under which they will realize the prospectus. In the phase of generating we will create possible options of solution based on collected information, which will for each individual project take in to account the time factor. In the evaluation stage we will define the risk factors and evaluation criteria. Consequently we will move on to the evaluation of possible variants of investment based on usage of multi criteria decision-making theory. Finally we will state the optimal strategy for selection of investors. Selection of the optimal alternate of entrepreneurial prospectus will meet the objective of this diploma work.

5. The phase of definition

5.1 Problem

As already outlined on the very beginning of this thesis we are facing the problem of revitalization of the area in urban neighbourhood Slatina. The challenging object is former Military Barracks Slatina. The major owner of these plots in this locality is an urban development company JIŽNÍ CENTRUM BRNO, a.s. (hereinafter reffered to JCB). This company has to select from different investors wishing to invest in this location. It is necessary to consider that cogitative land use plan of city of Brno has to be respected in chosen locality. The land use plan of city of Brno sets limit values and because of this there is no concern of this work to identify projects entirely unsatisfactory, since it is assumed that these projects have already been discarded because of inconsistency with the land use plan of city of Brno. The task is to select optimal solution of revitalization from the projects which meet the required parameters and the following objectives, solve the current disconsolate state of dormant and uncultivated district in the area attractive for investors with excellent locality and infrastructure.

5.2 Objectives

The objective can be clearly defined as a final state of solution of the above mentioned problem, which is successful revitalization of locality Military Barracks Slatina. The above linked objective is so broad that it is better to divide it into sub-group aims. This action will allow us to monitor the main objective from different and more varied levels of interest, which will help us to create more accurate picture of investment situation. From these sub-objectives, which reflect final state, is resulting the way of choosing investment project, which will meet above linked sub-aims as much as possible. The sub-aims, according to which area it relates, can be divided in economical, ecological and urbanization categories. Particular sub-aims we set in accordance with the required primary objective as follows:

Ecological objectives:

1. assuring of sufficient green extent for recreation and leisure activities
2. reduction of ecological burdens in the decontamination and minimal increase in exhalation exhaust gases

Economical objectives:

1. assuring adequate number of working employees
2. maximizing net income for the urban company JCB

Transportation objectives:

1. ensure a sufficient number of parking places

Urbanization objectives:

1. increase of attractiveness and ensure quality development of the elected locality
2. completion of the revitalization as one unit as soon as possible because the long-term-unfinished would negatively affect the overall shape of the resolved location very much
3. using of this area for non-commercial and cultural functions, administration, services and trade
4. number of flats

These objectives are reflected within the meaning of the various criteria by which we will then assess the degree of fulfilment of these milestones for the different alternatives. Thanks to the theory introduced in the chapter 3.2.1 we are able to identify complementary and competing objectives. The complementary relationship is clearly visible e.g. between these two objectives "Assuring of sufficient green breadth" and "Increase of attractiveness of the locality". On the other hand the competitive relationship can be discerned among the objectives of the "Minimal increase in emission of exhaust gases" and "Ensuring a sufficient number of parking spaces".

6. The phase of analyzing

In this stage of decision-making process we will create the collection and subsequent analysis of fundamental information that we will use for the creation of possible alternates of existing problems. The land use plan in discussed area sets following usage. The northen part has to be used for either administration or offices and retail. On the other hand the middle part is reserved for blocks of flats and the southern part will be used in accordance with land used plan for sport, relaxation and leisure activities. There is a roundabout planned in the land use plan which will simplify transportation from the Řípská and Hviezdoslavova streets to Černovice terrace industrial zone across railways Vlárská.

6.1 Determination of discussed area

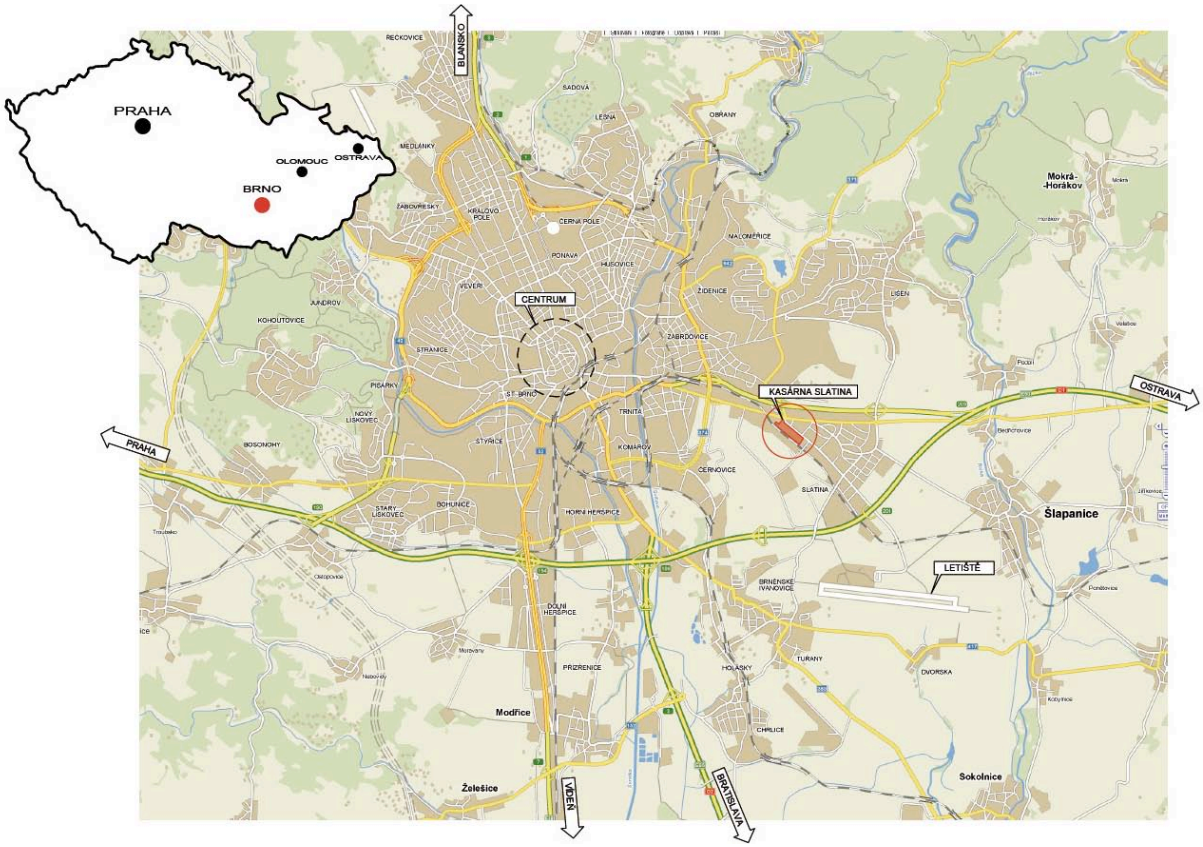
In the following paragraphs there will be defined and determined the object of former Military Barracks Slatina. We will discuss and visualize the location of the object, its history and former usage and also all of the object parameters. It is necessary to define the ownership structure and we will introduce all of three possible investors, which will compete each other with their entrepreneur intentions and visions of revitalization of Military Barracks Slatina.

6.1.1 Military Barracks Slatina location

The discussed are is located approximately 4 km east of the historic core of the city of Brno. It is situated in the cadastral territory Slatina in contiguity response to an industrial zone located on the street Řípská and industrial zone Černovice terrace. The convenient and easily accessible location is one of the most beneficial characteristics of the whole object. For more clear imaginations see the picture mentioned below. There is clearly visibility that the centre of the city of Brno is not far from the object and can be reached in 15 minutes by car or by public transport of the city of Brno. The picture shown below demonstrates location, which is close to all major roads and also to the city circle road in city of Brno. This connection is important in case that the former area of Military Barracks Slatina will be used for logistical purpose. Easily accessible

infrastructure and its connection to important moves can play a crucial role and be an important factor for the revitalization variant when the completely new city part will be built. To ensure smooth transport of goods and people is one of the most crucial factors for successful utilization of the reconstructed object of Military Barracks Slatina.

Picture no. 5: Location of Military Barracks Slatina



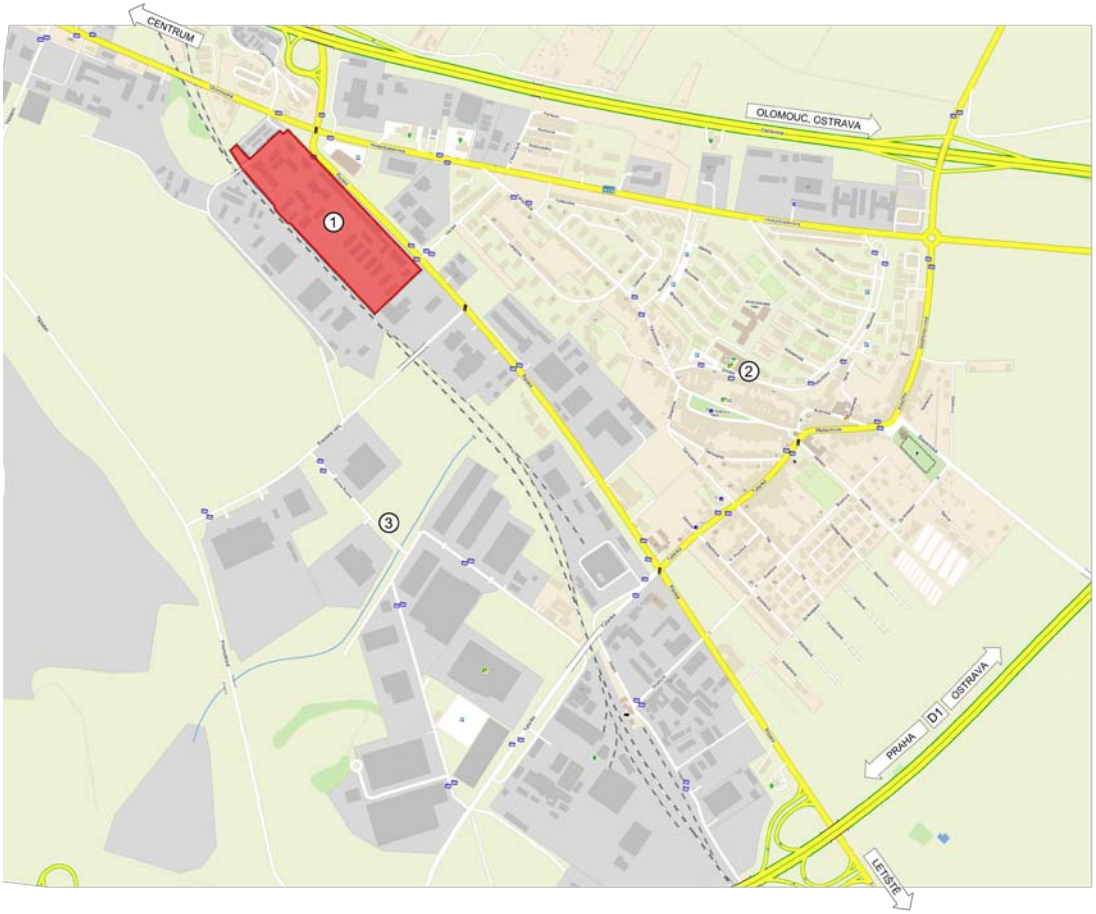
Source: Kasárna Slatina website, 2010.

Compared with the centre of the city of Brno the Military Barracks Slatina occupies more likely a marginal position, but it is a direct entrance into the Slatina's own territory and ties together the cross road towards the city centre of Brno, airport, Olomouc and local parts Židenice, Líšeň and Vinohrady. The mentioned above directions are clearly visually demonstrated on the picture no. 2 listed below.

The red coloured rectangle marked with number one represents the whole object of former Military Barracks Slatina and its location in more detailed picture within the city

part Slatina. The number two lays out the centre of the city part Slatina, where most of the cultural, commercial and social life takes place. The potential investor needs to take this fact into account and adapt the thoughtful project of revitalization of Military Barracks Slatina to these conditions.

Picture no. 6: More detailed location of Military Barracks Slatina within the city part



Source: Kasárna Slatina website, 2010.

The area marked with number three defines the industrial area of Černovice terrace. The usage of such close location these two objects and possible combined usage of commercial or other possible exploitations are within the discretion of investors. Such convenient location of the Military Barracks Slatina adds to this object attraction and gives investors the opportunity to extend the possible variants of usage of the object.

6.1.2 History

From 1931 until 1939 there was a deployed bomber regiment in barracks and during World War II the military barracks were used in the first phase by Air Force school Luftwaffe, and then at the end of war it was also used by the elite units of the German Army Air Force. After the World War II the 3rd Air Division, which was based on the 113th Czechoslovak Fighter Squadron from Great Britain operated here, then there were various departments in the barracks until 1990, when activity of the 8th Fighter Aviation Regiment was cancelled. Since 1991 Radio Systems Department, which conducted a survey of the airspace over the territory of Moravia operated here, later Switching Battalion moved into the area and operated here until 1993, it was then replaced by the Training Battalion of Mošnov, which operated here until 2001. In the facility there was deployed a total of about 150 military personnel and about 500 conscripts. The area served its purpose until 2004, subsequently the termination of a military garrison occurred in the context of the transformation of the Army of the CR.

6.1.3 The areal itself

The plot of Military Barracks Slatina a total extent of approximately 9.6 hectares, is flat, except for a small projection has a rectangular shape. As a former military area the plot is completely fenced and the whole area is accessible through a single gate in the street Řípská. The east side of the discussed area is determined by the street Řípská, the west side is delimited by the railway corridor. At the south and north sides the boundaries are lay out by adjoining areas. There are a many different objects within the area of Military Barracks Slatina. Most of them have been used for administrative, operational, recreational and military-technical purpose. The most important and most visible object is the administration building. The administration building is longitudinal and consist of three to four storey and it is situated close to the boundary with the street Řípská. The building was built in 1937, its height is c. 300 m, the constructed area is 3 817 m^2 as a whole. It is c. 67 410 m^3 of the building volume. This building is the most appropriate element for further using or reconstruction of the whole area. There are more other objects on the discussed plot. These object are relatively in satisfactory state and firmly usable according to construction and technical condition, the above mentioned object can make difficult conditions from the point of view of further development. Thanks to

advantageous and strategic placing (position near airport, connection to the railway service, main highway in Czech republic and easy access to city centre) the area is predestined to attract developers and provide bride scale of business opportunities.

6.1.4 Ownership structure

In March 2008, the city of Brno became the new owner of the site due to gift contract with the Ministry of Defence. Subsequently the company JCB became the owner of the premises on the basis of exchange contract with the city of Brno from 22.12.2008.

JIŽNÍ CENTRUM BRNO, a.s. is an urban joint-stock company, whose founder and 100% shareholder is a Statutory city of Brno. The Statutory city of Brno files area of Military Barracks Slatina as one of the city development locality suitable for revitalization and reuse. The urban neighbourhood Slatina perceives object of Military Barracks Slatina as an opportunity to expand south of the city and its natural connection to the industrial zone Černovice terrace.

6.2 The Investors introduction

In this chapter we will introduce companies that are interested in investing in area Military Barracks Slatina. The presentation of subsequent investors and their investment plans is based on real bids, which have been made by bellowed introduced investors. Some details are intentionally different from reality. The reason for such action is that not all of the participating companies provided their consent to the publication of their tenders, such restriction has to be respected.

For the purpose of revitalization of Military Barracks Slatina the owner declared a public tender which set the basic conditions for those interested to invest in above mentioned area.

Based on the submitted competitive projects from subsequent investors will be decided about optimal alternate of revitalization of Military Barracks Slatina. This decision will be supported by theoretical framework explained in the theoretical part of this diploma work. In the fact that investors perceive their business confidentiality as a valuable

know-how it was not allowed to publish real names of competitors and also the exact specifications of their investment projects. For this reason they use fictitious names of investors so as the investment project which have been proportionately adjusted.

Now we will present in more detailed way each of the investors, which intend to invest their financial resources in revitalization of Military Barracks Slatina.

6.2.1 Investor ABC

The first of three investors is company nicknamed in this diploma work as an “Investor ABC”, which is originally Czech company founded on Czech law and the law form of this company is Ltd. This company operates across the board throughout the Czech Republic. The main target objects, of this investor, are low-cost lands near highways and artery of traffic, former industrial areas, which created unused brown-fields today. Investor ABC mainly deals with the purchase, sale or preparing of various parcels for different uses, e.g. for companies which need to have factory buildings, stores and the quick and easy accessibility not only to the highway but also connection to logistics networks is highly important.

In terms of his participation in public tender promulgated by the company JCB the investor ABC, which intends to build logistic halls in the area of former Military Barracks Slatina, did not visualize the whole project and for this reason it will not be included.

6.2.2 Investor OPQ

Investor OPQ is a sub-company of a multinational corporation, which is focused on building-up financially accessible small-scale starter flats especially inhabited by young families, young single people or seniors. The company has more than 20 sub-companies all over the world but has mostly been interested in eastern markets. The investor OPQ is mainly interested in old brown-fields, desolate areas or uncultivated plots, which are located not in the centre of the city but the accessibility to the centre and other artery of traffic. Persons interested in such small-scale starter flats cannot afford from the price criteria flats in the city centre but most of them don’t have a car, so the easy accessibility to city, highways, shopping areas is one of the most important and

influencing criteria. The object of Military Barracks Slatina fits fully in this company's strategy.

The investor OPQ created the visualization and submited it in the terms of tenders conditions to the company JCB but the investor OPQ does not wish to publish. At the time of writing this thesis was the public tender and all the information connected to this problematic actual and most sensitive topic. And so the mentioned investor OPQ considered publication of an information as too risky and threatening his participation in the contest.

6.2.3 Investor XYZ

The third investor is a Czech company, which intends to finance its investment especially through a bank loan and also thanks to the financial support in the form of venture capital from one company, which has quarters in the neighbouring industrial zone Černovice terrace. Furthermore, the investor XYZ decided to fund the project of revitalization of one phase after the other. Once the phase of construction is completed, taking for example the administration area, the investor immediately converts the value of the building into money (e.g. renting, selling, etc.) and gained resources will be used for financing of another part of the revitalization of the Military Barracks Slatina.

The company is engaged in development activities. In company business strategy belongs buying land mostly in the central area of larger cities, where infrastructure and facilities are available for building housing units. As accrued from mentioned information the company focuses on building apartment houses. This project would be the first of its kind in term of investor's XYZ business activity. The main intention is to connect area of Military Barracks Slatina with the dynamic industrial zone Černovice terrace.

Investor XYZ not only submited a full visualization of the planned revitalization of Military Barracks Slatina but also allowed the publication of this information. Pictures linked below represent so far planned look of the Military Barracks Slatina revitalization.

Picture no. 7: Visualization of planned revitalization

Source: Kasárna Slatina website, 2010.

Picture no. 8: Visualization of planned revitalization – more detailed image

Source: Kasárna Slatina website, 2010.

7. The phase of generating

At this stage of decision-making process, we will present various alternates tendered by possible candidates in proclaimed public tender concerning Military Barracks Slatina. Particular submitted concepts of candidates represent the alternates of revitalization. Therefore we are looking for alternatives that will ensure the sufficient quality of the urban area, we will meet the traffic and technical requirements and at the same time generate sufficient increase in ecological value of the intended project and the financial aspect of the project needs to be taken into account as well. In the following chapter we will introduce in more detail the various proposals submitted by investors, who have been introduced already in the previous chapter.

7.1 Investor's ABC competition project introduction

The area of Military Barracks Slatina conceptually fits in company business plan and strategy - the area is situated 2 km from the highway D1 exit, which is directly accessible from Řípská street, nearby there is a road junction with highway D2 in the direction Bratislava and the Military Barracks Slatina are also located near the international airport Brno Tuřany. These above linked facts are the main reasons why Investor ABC accepted calls for this tender. In accordance with the company's business focus, the company would like to purchase the area for the construction of factory building and logistic halls. These newly built objects would be leased out to concrete manufacturers and providers of appropriate services. Investor ABC is aware that the municipal plan of city of Brno for this locality should create territory with multi-use for housing, sports, business and administrative. For this reason, the applicant plans to initiate change in the municipal plan of this locality so that it is consistent with its intent. The investor also proposes to the owner agreement for future purchase, which will be conditioned by successful negotiating of changes n municipal plan of city of Brno and also in accordance with the planned intention of the investor. Under authority of such agreement the investor has a right to call for the implementation of the sales contract with the owner.

In order to implement above described project the company will struggle for demolition

of all building and object in the layout area, including the administration building at the street Řípská. At the same time assumes the construction of internal roads linking the area over Vlárská railway to the industrial district Černovice terrace.

According to calculations by the gross floor extent, the investor presupposes the constructions of single-storey buildings with a gross floor area of 70 000 m^2. The price offered by investor to the owner is 85 € per m^2. It is assumed that the construction of two or three multifunctional halls should be used for the production of light industry with assembly lines and the other one or two buildings should be used as logistic centres or warehouses for company specializing in fast moving consumer goods. Investor also plans to raise 20 parking places for automotive vehicles and 10 cargo ramps for camions as an accessory equipment of above mentioned and intended multifunctional halls.

With the increase of traffic near the exit from discussed object and traffic around the object caused by logistical and trading. To make use of the area where the former administrative building stood, parking spaces will be put in its place. These parking spaces will be located parallel with the street Řípská. This parkway will enable downhill run and connection to the right lane street Řípská.

7.2 Investor's OPQ competition project introduction

Investor OPQ intends to construct residential buildings with apartments, which have acreage of 40 to 60 m^2 per flat. Business parterre is planned on the ground floors of apartment buildings, which will ensure the needs of residents in the housing units.

The project designed with a sufficient number of parking places, not only for apartment owners but also for any further visitors of the area. The number of housing units and future use of this area with its commercial and relaxation zone will require sufficient quantity of parking places, the contestant decided to built, in addition to the parking places in commercial zone, underground garages located in the basement of the apartment buildings. This intention will cover required number of parking places and the area will be useful for potential commercial activities. The owner also accepted the proposal to use the land located in the neighbourhood of the railway as a recreational

area for sports, leisure and relaxation. Investor OPQ is content to build such facilities as a foul territory for the residents of apartment buildings. A wide strip of greenery will be located next to the railway and along all the roads and its surrounding areas except the green solutions. The strip mentioned above will be conceived in park adjustment and the rest of the greenery will have a terraces shape. As a base for creating these terraces, earth mined out from the building of underground garages will be used. The forming of terrain into the green strip with the terraces creates a positive step for creating a barrier against noise from the railway and also the creation of amphitheatres of sitting places in this relaxation and recreation part of the whole area. The public places are shaped so that is possible to use the parterre as an area of shops and services. The pedestrian axis will be accompanied by a double avenue and mobiliary consisting of benches and public lighting. In a similar style incurred public area with many trees potted will be solved. A comfortable seating area for residents and visitors will be created under these trees.

The urban development concept considered the possibility of administration building demolition. The main reasons for such deliberation were as follows, building monotony, and little attractiveness or the need for complete reconstruction of the object. The investor decided to demolish the object of administration building and use the same area for building another apartment building.

Expected gross floor area for housing will meet 40 000 m^2 of gross floor area. The business plan assumes c. 40 000 m^2 of small-scale starter flats. The investor calculates with construction of c. 700 new small-scale flats and growing area population about 2000 new inhabitants. Small-scale flats are planned in concept of one bedroom with dining-recess and a small balcony. Apartments comprising of two bedrooms and some three bedrooms and a bathroom are planned on the ground plan of the former administrative building. Gross floor area for the housing in total will approximately occupy 48 000 m^2 and thus this intention will come into existence c. 850 new flats. The investor submit to use 20 000 m^2 of total area extend as a sport and leisure area mainly for local residents. Furthermore there is a creation of 520 parking places intended, these parking places will serve to the inhabitants of residential units (mainly in the planned underground garages) as well as the visitors of the areal. The commercial area will cover 3500 m^2 of total acreage mostly in the ground floor of newly built objects.

Investor OPQ excludes non-commercial area out of his business intention, as an uninteresting and unprofitable part of this intention.

The price for which the investor is willing to buy land in this area, is due to increased cost, which will not reach a value higher than 100 € per m^2. The cost increase was mostly caused by the idea of underground car park and green space conception, which will also serve as a sound proofing barrier. The creation of such a barrier and car park was imperative and the provision of convenient conditions for residents as well. Without these two mentioned parameters the object would loose its attractiveness.

7.3 Investor's XYZ competition project introduction

Investor XYZ want to proceed fully in accordance with the municipal plan of city of Brno, taking for example office space and commercial usage is planned in places where proposed utilization of shops and service, in places destined for living the investor intends to build residential buildings and in the areas planned for the green area there should be a mixture, area of sports and that of other recreational activities. The administration building is the dominant and most visible part of the whole area of Military Barracks Slatina, and has its history. The investor XYZ made decision, on before mentioned reasons, to keep the administration building as a part of a new project and decided that this building will undergo complete repair and reconstruction. Subsequently, after the final object reconstruction the area will be used as a new administrative and office object, it can be used as a science and research spaces, lecture hall and or public administration.

Investor plans to use the part of the remaining functional plots of discussed area for a construction of a hotel and housing connected with foul territory for employees, which are working in companies situated in industrial zone Černovice terrace. This intended hotel should ensure accommodation for businessmen participating in conferences or those who meant to invest in the industrial zone Černovice terrace.

Planned housing building-up will be divided into the construction of four independent residential buildings – two blocks will be aimed at small-scale starter flats with average measurement from 40 to 50 m^2. Flats constructed like this will focus on the young

families with children and companies operating in Černovice terrace area will try to place their employees in these flats. The two remaining blocks will constitute of flats with an average measurement ranging from 60 – 100 m^2 and will be destined to financially assured managers of companies operating in industrial zone Černovice terrace. We can assume that in the future those flats will be used as company flats and will play a big role in employee rewarding program.

The setting up of the communications plays an important role in the whole area. Two longitudinal axes of communications will be created. One pedestrian will form a transition between the administration buildings and new constructions. The second one will create a transition between buildings and strip of greenery, adjacent to the railway. Transverse axis, expect to the aforementioned passage of the central transit via administration building are based on external influences. The municipal plan of city of Brno defines connection between Military Barracks Slatina railway's part of Černovice terrace located westerly across the railway, which will increase high profile buildings. The second transverse axis will create extending up and connecting street Vlárská and line up of the discussed area at the frontage road. Due to the intended connection to the Černovice terrace occurred the idea to transform Military Barracks Slatina to an additional service area for dynamically developing industrial zone Černovice terrace.

Public spaces will be formed so that maximum of extents for shops and services in the parterre will be used. Pedestrian axis will consist from double alley and benches and public lighting. In this similar style resulting public space will be solved, which in the end will consist of evergreen tree species. The belt of greenery is considered to create a multifunctional playing field, used for sports. Since the main persons interested in living in this area will be young families with children it is necessary to built fully equipped children playground and foul territory for mothers with children.

An important element, which will affect the overall usability and the investment itself, will be connection with the Černovice terrace with the new bridge over the railway. With increasing traffic intensity in this area it is essential to built a roundabout at intersection of streets Řípská, Olomoucká and Hviezdoslavova. In the final state of this investment its intended to move the train station Slatina and incorporate area of former Military Barracks Slatina into and integrated transport system of South Moravia region.

In total number the investor XYZ intents to dispose with 8 000 m^2 of administration area located right in reconstructed Administration building, housing area is intended to reach extent of 35 000 m^2 and commercial area together with the hotel, ground floor of Administration building together with Shopping & Service area contain acreage of 3 000 m^2. The urban green area will contain 15 000 m^2 of intended proposal of investor XYZ. Part of Administration building about extend 1 000 m^2 will be used as a non-commercial area, such as an art gallery. For the purposes of the entire complex the applicant intent to built 420 parking places in total. The investor XYZ as a contestant in this public tender is willing, in accordance to all costs connected to rebuilding and pulverization of the area, to offer to the owner 89 € per m^2.

For clarity, the above linked data are shown in the following table below. The table will formulate briefly direct comparison between intended planes of all participant investors.

Table no. 3: Summary of investment offers

	Investor ABC	**Investor OPQ**	**Investor XYZ**
Housing area (m^2)	0	48 000	35 000
Administration area & trade (m^2)	0	0	8 000
Urban green area (m^2)	0	20 000	15 000
Non-commercial & cultural usage area (m^2)	0	0	1 000
Warehouse & production usage (m^2)	70 000	0	0
Shopping & service area (m^2)	0	3 500	3 000
Number of parking places (pieces)	30	520	420
Offered purchase price per meter (€)	85	100	89

Source: Created by author.

8. The phase of Evaluation

In this chapter, named Phase of Evaluation, we will discuss and explain each of the evaluation criteria and we will find the significance of each individual of the designed projects of revitalization of Military Barracks Slatina submitted by all three investors and their proposals for revitalization. All of the needed information was already provided in previous chapters of this thesis, so now we will only summarize all the collected information and evaluate all the results of our research.

8. 1 Evaluative criteria

Within the context of the evaluation criteria would be appropriate to return to the reasoning presented in the chapter 5.2 named Objectives where the partial objectives of the project have been determined. The evaluative criteria are based on desired goals and also express level of their fulfilment and hence there is a qualified selection of evaluative criteria, a key activity in decision-making process. In the case of such an ambitious investment project, which the revitalization of Military Barracks Slatina undoubtedly is, the qualified selection of evaluative criteria is therefore a very consequential nature. To obtain the resulting optimal variant were both used as quantitative and qualitative criteria.

The theoretical framework recognizes two types of criteria – quantitative and qualitative. The qualitative types of criteria represent a certain quality of meeting objectives. Considering the difficult way to formulate the verbal evaluation was selected the scale of marks. This scale will be to express the level of the goal fulfilment of a given quality criterion. The scale has 5 rates whereas rate “very good” corresponds to 1, rate of satisfaction corresponds approximately to mark 2.3, rate sufficient corresponds to mark 3.5, rate verdict with defects mark 4.2 and insufficient rate corresponds to mark 5. The quantitative criteria are exactly formulated in the units. In this case, taking for example, housing area in square meters, the number of parking places in pieces and so on. Rated qualitative criteria are consequently, as well as quantitative criteria, converted using The method of basic variants of integral formulation.

The main objective of Military Barracks Slatina revitalization is to create a brand new city district with multifunctional use. We also need to consider that the owner of this

former military object is not a classic company but a city company of which its main purpose is not just to create profit but create also other values for the city of Brno itself and for the inhabitants. So the main objective of the whole project is not the profit maximization but to create convenient, representative and user-friendly city district. By defining the pivotal objective, which is too extensive, uncertain and difficult determined for project evaluation, we need to define the partial objectives. On the basis of predefined partial objectives we are able to assess the competing project really responsibly with no doubts about the optimal choice. The sub-objectives represent concrete specific area, which should meet general objective – Military Barracks Slatina revitalization as a part of creating new city part in Brno.

The sub-objectives are defined as follows:

- administrative use of the object
- financial credibility of the investors
- quality architectural concept
- use of the object for housing
- maximizing profit for the object owner
- utilization for social and cultural events
- sufficient capacity of parking places
- the shortest possible duration of project realization
- utilization as shopping and service area
- quality urban concept
- sufficient acreage of the green area

So that we can evaluate and compare all competing project between each other, how much they fulfil each of the predefined sub-objectives, we need to introduce comparative instrument so-called Evaluative criteria. Evaluative criteria will identify the extent to which each of the assessed competitive projects will fulfil each of the

particular sub-objectives.

The list of selected evaluative criteria is as follows:

- Administration area
- Development financial ensuring
- Architectural rendering
- Housing area
- JCB net income from project realization
- Non-commercial & cultural area usage
- Number of parking places
- Time of development
- Trade & service area
- Urban quality development
- Urban green area

In the following sub chapters we will focus our attention stepwise on each of the evaluative criteria mentioned above and we will define the exact meaning of the various criteria we defined in this chapter.

8.2.1 Administration area

This criterion reflects the degree of goal fulfilment. The goal fulfilment is defined as land for disruptive business activities and administrative functions. The criterion expresses how many square meters determined for construction will be occupied by business and retail activities in each of the competing project. This criterion has a quantitative character and it is based on appropriate land area and also on structure distribution of the area. Administration area is asserted by the investors for its ability to create stable high-income, on renting or selling in comparison with housing area. For exact values of administration area criterion, see the Table no. 4.

Table no. 4: Administration area

Criterion	**Investor ABC**	**Investor OPQ**	**Investor XYZ**
Administration area (m^2)	0	0	8 000

Source: Created by author.

8.2.2 Development financial ensuring

Development financial ensuring as a criterion has a qualitative nature. The evaluator himself determines the value of the criterion according to predefined scale of values and his subjective opinion. The criterion represents the ability and method in which the investor is able to cover costs linked with realization of revitalization of The Military Barracks Slatina– e.g. investors own self-sufficient financing, a loan or distribution of revitalization on stages, first the investor will realize the housing area and subsequently sells the area and from the profit made from those sales the investor will finance other parts of the project.

Table no. 5: Development financial ensuring

Criterion	**Investor ABC**	**Investor OPQ**	**Investor XYZ**
Development financial ensuring (€)	200 000	90 000	30 000

Source: Created by author.

8.2.3 Architectural rendering

This is a quantitative criterion and expresses the way of architectural concept and design of the project. In our case, this is an important factor because the investor undertakes to build comprehensive, representative object with pleasant appearance in the area of former Military Barracks Slatina. Since the original owner is a city company, it’s one of its intentions to create a contract with investor to create in this area a harmonious object. The investors have been classified due to qualitative criteria on a scale of one to five. This criterion expresses the architectural design of the discussed area. While one

expresses the best evaluation the other marks have a downward tendency.

Investor ABC was with his intention to build a logistical hall with a very simple design awarded with a mark 3.9. Conception of this project is for the discussed area unsuitable and very insensitive.

Investor OPQ, although does not intend to create an object of considerable architectural quality design, the underground garages and green bulwark improved evaluation considerably. This territory can be then used for green vegetation, etc. The investor wants to perpetuate the administration building and use it for housing and therefore it is necessary to make partial adjustments, which will change the overall character of the building. For all the facts linked above the mark reaches value of 1.9.

Investor XYZ has decided to maintain genius loci of the administration building, which was realized on the basis of concepts created by famous architect Jindřich Kumpošt in the interwar modernism era. This decision has positive influence in the evaluators and therefore after evaluating the overall concept of the project, the mark reaches value of 2.3.

The criterion again is based on land area and the structure distribution of the various options (see Table no. 6).

Table no. 6: Architectural rendering

Criterion	**Investor ABC**	**Investor OPQ**	**Investor XYZ**
Architectural rendering	3.90	1.90	2.30

Source: Created by author.

8.2.4 Housing area

This criterion has a quantitative nature and it is couched in square meters, which represents how much of the discussed area will be occupied by the area intended to built housing units. For the city of Brno is this criterion one of the most important criteria and the city of Brno is concerned in the fact, that developers reserved at least part of the object to housing area. This investment should bring life in this area also in night and it

will avoid the situation of creating so-called office ghetto. Housing area criterion is based on particular investment proposals of investors (see Table no. 7).

Table no. 7: Housing area

Criterion	**Investor ABC**	**Investor OPQ**	**Investor XYZ**
Housing area (m^2)	0	48 000	35 000

Source: Created by author.

8.2.5 JCB net income from project realization

This quantitative criterion is expressed in Euro currency. The criterion illustrates the value of final amount for the sale or other form of alienation of the area owned by company JCB to the investors in the configuration after taking into account any further costs associated with the purchase or other form of alienation of the property. Given that the JCB is the urban company and its highest authority - general meeting, which is created from members of City Council, it is clear that the company has interests in accordance with the interests of the city of Brno. Due to this fact, it is not maximizing this criterion one of the main priorities, as would be expected for a typical business company.

Table no. 8: JCB net income from project realization

Criterion	**Investor ABC**	**Investor OPQ**	**Investor XYZ**
JCB net income from project realization (€)	5 950 000	7 150 000	4 806 000

Source: Created by author.

8.2.6 Non-commercial & cultural area usage

Non-commercial & cultural area usage criterion has a quantitative nature and it expresses in square meters how much of the area will be reserved for non-commercial and cultural purposes. This utilization includes various allowance organizations, facilities for cultural activities and public educations, other facilities for disable citizens, etc. In addition, the amenities area such as bicycle paths, playgrounds, etc. can be classified in this criterion. This kind of use is not generally very welcomed by investors, mainly because such area has a status of public domain, which doesn't crate any profit on its own.

Table no. 9: Non-commercial & cultural area usage

Criterion	**Investor ABC**	**Investor OPQ**	**Investor XYZ**
Non-commercial & cultural usage area (m^2)	0	0	1 000

Source: Created by author.

8.2.7 Number of parking places

This is again a quantitative type of criteria. It express in square meters the area within the object reserved for parking places for automotive vehicles. If we leave aside the fact that a certain number of parking places is an obligatory part of every project development in combination with insufficient number of parking places in city of Brno, this criterion becomes one of the major factors for the assessing of this criteria in city of Brno. Investors are not too excited about this duty because the area occupied by the cars could be for sure used for more profitable way and therefore they do not offer more parking place than the statutory requirements. Conversely, if the investors are planning to build housing area in intended project, the criterion of number of parking places gains more importance because it is crucial to ensure sufficient number of parking places to the potential residents and visitors of the object. Due to this decision the cost of construction will rise and will reduce, e.g. commercial usage of the area which is more profitable, but on the other side the number of sufficient parking places is crucial factor for intended building of housing area.

Table no. 10: Number of parking places

Criterion	**Investor ABC**	**Investor OPQ**	**Investor XYZ**
Number of parking places (pieces)	30	520	420

Source: Created by author.

8.2.8 Time of development

The criterion reflects the degree to realize the goal of the project as far as possible in the shortest time. The time realization considers only the building construction without the time when the building permits will be obtained, etc. Building permits can not be affected by the investor and he has to accept the time commanded from the authorities. At the same for simplicity, we assume that in existing configuration of the project means that the companies will begin the construction approximately simultaneously, so the length of construction will be given by the length of the longest single construction project. It is obvious that in the interest of both parties (city of Brno and the investors) is to complete the construction as soon as possible. In the term of city of Brno is the shortest possible time of constructions because of these negative factors connected with the construction, e.g. noise, dust, traffic restriction on both personal and public transport, etc. From the investors point of view negative factors can be named mainly as a costs associated with minimizing the negative of the above, namely to ensure minimal noise, dust, etc. For detailed values of this criterion for each investor see Table no. 11.

Table no. 11: Time of development

Criterion	**Investor ABC**	**Investor OPQ**	**Investor XYZ**
Time of development (months)	12	18	30

Source: Created by author.

8.2.9 Trade & service area

Trade & service area is a quantitative criterion, which expresses space in square meters within the object reserved for services like hotels, restaurants, fitness centres, hairdressers and other services primarily of commercial nature. This type of build-up area is most wanted and promoted by investors as a most profitable type of build-up area.

Table no. 12: Trade & service area

Criterion	**Investor ABC**	**Investor OPQ**	**Investor XYZ**
Shopping & service area (m^2)	0	3 500	3 000

Source: Created by author.

8.2.10 Urban quality development

In this qualitative criterion the experts are assessing the architectural character and total coordination of project configuration with insistence of material quality and also artistic representation of the solution. The owner decision was based on ideological studies, concept and steric visualizations, sent on offer by individual investors. We can assume that the investors elaborated their investment proposals in most optimistic way and subsequently in case there is need for cutting cost they worked out a compromising option of the revitalization of Military Barracks Slatina. Therefore we will find results of this assumption and determine that the more the project is limited compared to the originally proposed concept, the more the resulting quality of urban area can be harmed.

Table no. 13: Urban quality development

Criterion	**Investor ABC**	**Investor OPQ**	**Investor XYZ**
Urban quality of development	3	1.5	2

Source: Created by author.

8.2.11 Urban green area

Urban green area is a quantitative criterion and expresses in square meters how big part of the whole investment project will be allocated to the urban and landscape green vegetation. Investors are not keen to invest financial resources to such type of area because the profit is low. On the other hand this criterion is very important to the city of Brno because more than just an office ghetto is created from the housing area. The criterion is again based on land area and the structure distribution of the various options (see Table no. 14).

Table no. 14: Urban green area

Criterion	**Investor ABC**	**Investor OPQ**	**Investor XYZ**
Urban green area (m^2)	0	20 000	15 000

Source: Created by author.

8.3 Alternates Evaluation

In this chapter we will compare particular alternatives by using multi-criteria decision-making theoretical framework. The tables, which are presented above, there are all of the collected information in order to grant lucidity as much as possible. To be able to compare all of the competing projects, we are going to use procedures and methods of multi-criteria decision-making. The main instrument of this theoretical framework consists of the decision matrix. In the theoretical part we have presented three possible options of multi-criteria decision-making, which are, under conditions of certainty, risk and uncertainty. In our case we will use the decision-making under the conditions of certainty, which is demonstrated in a matrix below.

The next step occurred in the table no. 15: Multi-criteria decision matrix under certainty we converted the values. This transformation was done by using Basic method of variants, which transformed the original numbers into the ratio numbers. After converting the resulting values are shown in the table no. 16.

Table no. 15: Multi criteria-decision matrix under certainty

Criterion	**Investor ABC**	**Investor OPQ**	**Investor XYZ**
Administration area (m^2)	0	0	8 000
Development financial ensuring (€)	200 000	90 000	30 000
Architectural rendering	3.90	1.90	2.30
Housing area (m^2)	0	48 000	35 000
JCB net income from project realization (€)	5 950 000	7 150 000	4 806 000
Non-commercial & cultural usage area (m^2)	0	0	1 000
Number of parking places (pieces)	30	520	420
Time of development (months)	12	18	30
Shopping & service area (m^2)	0	3 500	3 000
Urban quality of development	3	1.5	2
Urban green area (m^2)	0	20 000	15 000

Source: Created by author.

Table no. 16: Transformation of values using Basic method

Criterion	**Investor ABC**	**Investor OPQ**	**Investor XYZ**
Administration area (m^2)	0.0000	0.0000	1.0000
Development financial ensuring (€)	1.0000	0.4500	0.1500
Architectural rendering	1.0000	0.4872	0.5897
Housing area (m^2)	0.0000	1.0000	0.7292
JCB net income from project realization (€)	0.8322	1.0000	0.6722
Non-commercial & cultural usage area (m^2)	0.0000	0.0000	1.0000
Number of parking places (pieces)	0.0577	1.0000	0.8077

Time of development (months)	0.4000	0.6000	1.0000
Shopping & service area (m^2)	0.0000	1.0000	0.8571
Urban quality of development	1.0000	0.5000	0.6667
Urban green area (m^2)	0.000	1.0000	0.7500

Source: Created by author.

To demonstrate the importance of particular criteria we must assign a weight to them. We can use any one of the two methods. The first one is the basic percentage valuation in total value of 100%. This method puts high demands and pressure on the evaluator and these factors are associated with the need of constant comparison of all the criteria at once, because of this reason we are going to use the second method called Fuller triangle. This method is more procedural, demanding, but from the evaluators point of view, it is more convenient. The Fuller triangle method helps to focus when comparing the importance of criteria always but only among these two methods.

For purpose of this master thesis the following table was created in such form that the evaluating criteria have been filled out.

Table no. 17: The exemplary form

Criteria (j)										**Number of circlets**	**Criteria ranking**
1	1	1	1	1	1	1	1	1	1		
2	3	4	5	6	7	8	9	10	11		
	2	2	2	2	2	2	2	2	2		
	3	4	5	6	7	8	9	10	11		
		3	3	3	3	3	3	3	3		
		4	5	6	7	8	9	10	11		
			4	4	4	4	4	4	4		
			5	6	7	8	9	10	11		
				5	5	5	5	5	5		
				6	7	8	9	10	11		
					6	6	6	6	6		
					7	8	9	10	11		
						7	7	7	7		
						8	9	10	11		
							8	8	8		

							9	10	11		
								9	9		
								10	11		
									10		
									11		
									SUM		

Source: Created by author.

The table no.18 determines what criteria in which the line and subsequently the number of circle belong to and, in which the list of evaluating criteria is introduced. The list of evaluating criteria is in alphabetical order not according to the criteria preferences. The ranking in the table corresponds to the number in the form.

Table no. 18: The list of criteria

Criterion no.	*Criterion name*
1	Administration area
2	Development financial ensuring
3	Architectural rendering
4	Housing area
5	JCB net income from project realization
6	Non-commercial & cultural usage area
7	Number of parking places
8	Time of development
9	Shopping & service area
10	Urban quality of development
11	Urban green area

Source: Created by author.

Thus prepared forms were sent to the experts from various fields, e.g. architects, urban planners, investors, environmentalists, sociologists, economists, etc. Completed forms will be attached to this thesis. For lucidity we will further use data analyzed from these forms only. Based on the data we obtained from the completed forms after having

applied the Fuller method. The weight of criteria is listed in the table no. 19.

Table no. 19: The weight evaluation

Criteria (j)		Experts (i)									
		1	2	3	4	5	6	7	8	SUM	**PVI**
1	**Circlets number**	5	1	4	8	3	0	0	8	29	**3.63**
	Ranking n_{1i}	7	11	8	2	9	11	11	2	61	
2	**Circlets number**	4	5	4	7	4	2	5	2	33	**4.13**
	Ranking n_{2i}	8	6	7	4	6	9	6	9	55	
3	**Circlets number**	6	3	4	7	5	3	2	4	34	**4.25**
	Ranking n_{3i}	5	9	6	5	5	8	9	8	55	
4	**Circlets number**	7	10	9	3	6	10	10	6	61	**7.63**
	Ranking n_{4i}	3	1	2	8	4	1	1	5	25	
5	**Circlets number**	6	9	0	2	0	1	6	7	31	**3.88**
	Ranking n_{5i}	4	2	11	9	11	10	5	3	55	
6	**Circlets number**	5	2	6	0	4	4	5	5	31	**3.88**
	Ranking n_{6i}	6	10	5	11	8	7	7	6	60	
7	**Circlets number**	3	5	3	9	8	8	10	7	53	**6.63**
	Ranking n_{7i}	9	5	9	1	2	3	2	4	35	
8	**Circlets number**	3	3	7	8	8	6	1	2	38	**4.75**
	Ranking n_{8i}	10	8	4	3	3	5	10	10	53	
9	**Circlets number**	7	7	1	5	10	9	7	9	55	**6.88**
	Ranking n_{9i}	2	3	10	6	1	2	3	1	28	
10	**Circlets number**	2	6	7	4	4	7	7	0	37	**4.63**
	Ranking n_{10i}	11	4	3	7	7	4	4	11	51	
11	**Circlets number**	8	4	10	1	3	5	3	5	39	**4.88**
	Ranking n_{11i}	1	7	1	10	10	6	8	7	50	

Source: Created by author.

The next table no. 20 shows usage of gained weight criteria and we multiply these numbers with the transformed values from Table no. 16: Transformation of values using Basic method. This procedure enables us to make final valuation of tender, of revitalization of Military Barracks Slatina. Results are shown in Table no. 20: The matrix of multi-criteria decision-making process under certainty after application of weight criteria, which is listed below this text.

Table no. 20: The matrix of multi-criteria decision-making process under certainty after application of weight criteria

Criterion	*Criterion weight*	**Investor ABC**	**Investor OPQ**	**Investor XYZ**
Administration area (m^2)	*3.88*	0.0000	0.0000	3.8800
Development financial ensuring (€)	*4.13*	4.1300	1.8585	0.6195
Architectural rendering	*4.25*	4.2500	2.0705	2.5064
Housing area (m^2)	*7.63*	0.0000	7.6300	5.5635
JCB net income from project realization (€)	*3.88*	3.2288	3.8800	2.6080
Non-commercial & cultural usage area (m^2)	*3.88*	0.0000	0.0000	3.8800
Number of parking places (pieces)	*6.63*	0.3825	6.6300	5.3550
Time of development (months)	*4.75*	1.9000	2.8500	4.7500
Shopping & service area (m^2)	*6.88*	0.0000	6.8800	5.8971
Urban quality of development	*4.63*	4.6300	2.3150	3.0867
Urban green area (m^2)	*4.88*	0.0000	4.8800	3.6600
SUM	***55.42***	**18.5213**	**38.9940**	**41.8063**

Source: Created by author.

To determine the optimal alternate we only need to compare gained values, analyze them and express them in number, Table no. 20: The matrix of multi-criteria decision-making process under certainty after application of weight criteria. In the last row of table mentioned above we get a definitive evaluation of each project tendered by investors. As an optimal alternate we consider the alternate, which reaches the highest value in the line called SUM in the Table no. 20: The matrix of multi-criteria decision-making process under certainty after application of weight criteria. After applying the methods of multi-criteria, decision making is obvious that alternate of revitalization of Military Barracks Slatina proposed by investor XYZ reaches the highest values in the evaluation phase, which is based on analyzing of all the gained data. Based on all the data and analyzing linked in previous chapters **the competitive project of investor XYZ will be recommended for realization.**

Conclusion

The aim of this thesis was the application of methods of decision-making analysis to solve the decision problem of revitalization of the former Military Barracks Slatina.

In the theoretical part we made a short introduction to the decision in general, then the basic terminology of general theory of managerial decision-making was defined and further in the framework of decision analysis, we characterized the decision-making process and its elements. Subsequently, we have introduced chosen procedures and tools, which are used in various stages of decision-making process and which were subsequently applied in the practical part of this diploma work. We have described in particular the decision-making matrix, Bayesian rule, the method of linear partial functions utility to determine the incremental valuation of alternatives, the method of Fuller triangle was introduced, which was used for determining the weight of evaluation criteria.

In the practical part in compliance with the theoretical definition of decision-making process we first defined the problem area and then set the goals, which subsequently have to be achieved. In the next stage of the decision-making process, i.e. at the stage of analyzing, we described the absolute conditions of problem solving, especially the geographical boundaries of the discussed area, ownership structure of the object and territory and current use of locality also as short investors introduction, who intend to participate in the competition and present their competitive projects on how to revitalize the area of Military Barracks Slatina. Subsequently in the phase of generating we introduced various alternatives of area revitalization, based on various studies and expert opinions. At this chapter we have also performed a preliminary comparison of competitive alternates in terms of advantages and disadvantages that each of the mentioned solutions bring. Crucial phase of decision-making process was in the practical part of this thesis the evaluation phase, in which we have defined each evaluation criteria and configured scale and values for subsequent evaluation of the optimal alternate and on one of the last sub-chapters of this diploma work we accomplished evaluation of all discussed alternatives using the theoretical framework of the decision matrix. Within the frame of particular alternates evaluation we first determined (applying the Basic method options) the weight of evaluation criteria

reflecting the importance of meeting targeted sub-objectives. So determined weight of criteria were written down for particular alternatives in decision-making matrix multi-criteria decision making under conditions of certainty. Furthermore, we transformed the values gained from matrices to ratio numbers due to basic method options. The ratio numbers were transformed because the weight of criteria into the decision-making matrix in condition under certainty, which identified the optimal alternative of this decision problem. Based on the results of previous chapters in this diploma work we selected the optimal alternate recommended for implementation. To obtain the weight of criteria we used the method of Fuller triangle, for which were created the form and criteria, assessed by experts from selected branch of activities.

The procedures presented in previous chapters of this diploma work demonstrate that the optimal solution in decision problem revitalization of Military Barracks Slatina is the alternative, which intends to transform former military object in supporting area for Černovice terrace and subsequently plans the interconnection of these two areas, which should bring huge benefits to both areas. A second possible alternate, which offers a higher price for the land but does not pay so much attention to the criteria which are preferred by the original owner of the city of Brno. The original owner prioritizes fulfilment of targeted sub-objectives and criteria before any profit. The second competitive alternate does not consider in the proposed plan of realization, e.g. no non-commercial or cultural areas, which is one of the preferred criteria. The least suitable solution according to used methodology is a alternate presented by investor ABC, which offers the lowest price for the land and intends to use the object only unilaterally – building up the logistical halls. This project is unacceptable because it does not fulfil any of defined evaluative criteria.

The company JIŽNÍ CENTRUM BRNO, a.s. published on 14th June 2010 regulation of the Board of directors of the company (held on 11th June 2010) decision that the best competition project for the implementation of the Military Barracks Slatina revitalization has been choosen. The future developer became the company IMOS development, UIF, a.s. The decision was based on the recommendations of the evaluation commission created by JCB. Investor and the company JCB are currently negotiating the final form of contractual relationship.

After a successful and official investor selecting, we may summarize the fact that the evaluation commitee reached the same opinion as the author of this thesis because both evaluators are independently agreeing on selecting the same investor and investment project of revitalization. Because under the assumed name „investor XYZ“, who after the application of theoretical framework of multi-criterial decision-making reached the best values, was in the real project introduced by the company IMOS development, UIF, a.s. I there for conclude same opinion as the evaluation commission established by JCB and recommend that the implementor of this project should be IMOS develompent, UIF, a.s. or so called „investor XYZ“ the implementation of the project. The practical use of the theory of multi-criteral decision-making has been proved.

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List of graphic works

List of appendices

Appendix 1: Form no. 1

Criteria (j)										Number of circlets	Criteria ranking
(1)	**(1)**	1	1	**(1)**	**(1)**	1	1	**(1)**	1	*5*	**7.**
2	3	**(4)**	**(5)**	6	7	**(8)**	**(9)**	10	**(11)**		
	(2)	2	2	**(2)**	2	**(2)**	2	**(2)**	2	*4*	**8.**
	3	**(4)**	(5)	6	**(7)**	8	**(9)**	10	**(11)**		
		(3)	**(3)**	**(3)**	**(3)**	3	3	**(3)**	**(3)**	*6*	**5.**
		4	5	6	7	**(8)**	**(9)**	10	11		
			(4)	**(4)**	**(4)**	**(4)**	4	4	**(4)**	*7*	**3.**
			5	6	7	8	9	**(10)**	**(11)**		
				5	**(5)**	5	**(5)**	**(5)**	**(5)**	*6*	**4.**
				(6)	7	**(8)**	9	10	11		
					(6)	**(6)**	**(6)**	**(6)**	6	*5*	**6.**
					7	8	9	10	**(11)**		
						(7)	7	**(7)**	7	*3*	**9.**
						8	**(9)**	10	**(11)**		
							8	8	8	*3*	**10.**
							(9)	**(10)**	**(11)**		
								(9)	9	*7*	**2.**
								10	**(11)**		
									10	*2*	**11.**
									(11)	*8*	**1.**
									SUM	*56*	

Appendix 2: Form no. 2

Criteria (j)										Number of circlets	Criteria ranking
1	1	1	1	1	1	**(1)**	1	1	1	*1*	**11.**
(2)	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	8	**(9)**	**(10)**	**(11)**		
	(2)	2	2	**(2)**	2	**(2)**	2	**(2)**	2	*5*	**6.**
	3	**(4)**	**(5)**	6	**(7)**	8	**(9)**	10	**(11)**		
		3	3	3	3	**(3)**	**(3)**	3	3	*3*	**9.**
		(4)	**(5)**	**(6)**	**(7)**	8	9	**(10)**	**(11)**		
			(4)	**(4)**	**(4)**	**(4)**	**(4)**	**(4)**	**(4)**	*10*	**1.**
			5	6	7	8	9	10	11		
				(5)	**(5)**	**(5)**	**(5)**	**(5)**	**(5)**	*9*	**2.**
				6	7	8	9	10	11		
					6	6	6	6	6	*2*	**10.**
					(7)	**(8)**	**(9)**	**(10)**	**(11)**		
						7	7	7	**(7)**	*5*	**5.**
						(8)	**(9)**	**(10)**	11		
							8	8	**(8)**	*3*	**8.**
							(9)	**(10)**	11		
								(9)	**(9)**	*7*	**3.**
								10	11		
									(10)	*6*	**4.**
									11	*4*	**7.**
									SUM	*55*	

Appendix 3: Form no. 3

Criteria (j)										Number of circlets	Criteria ranking
(1)	1	1	**(1)**	1	**(1)**	1	**(1)**	1	1	*4*	**8.**
2	**(3)**	**(4)**	5	**(6)**	7	**(8)**	9	**(10)**	**(11)**		
	(2)	2	**(2)**	2	**(2)**	2	**(2)**	2	2	*4*	**7.**
	3	**(4)**	5	**(6)**	7	**(8)**	9	**(10)**	**(11)**		
		3	**(3)**	3	**(3)**	3	**(3)**	3	3	*4*	**6.**
		(4)	5	**(6)**	7	**(8)**	9	**(10)**	**(11)**		
			(4)	**(4)**	**(4)**	**(4)**	**(4)**	**(4)**	4	*9*	**2.**
			5	6	7	8	9	10	**(11)**		
				5	5	5	5	5	5	*0*	**11.**
				(6)	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**		
					(6)	6	**(6)**	6	6	*6*	**5.**
					7	**(8)**	9	**(10)**	**(11)**		
						7	**(7)**	**(7)**	7	*3*	**9.**
						(8)	9	10	**(11)**		
							(8)	8	8	*7*	**4.**
							9	**(10)**	**(11)**		
								9	9	*1*	**10.**
								(10)	**(11)**		
									10	*7*	**3.**
									(11)	*10*	**1.**
									SUM	*55*	

Appendix 4: Form no. 4

Criteria (j)										Number of circlets	Criteria ranking
1	**(1)**	**(1)**	**(1)**	**(1)**	1	**(1)**	**(1)**	**(1)**	**(1)**	*8*	**2.**
(2)	3	4	5	6	**(7)**	8	9	10	11		
	(2)	**(2)**	**(2)**	**(2)**	2	2	2	**(2)**	**(2)**	*7*	**4.**
	3	4	5	6	**(7)**	**(8)**	**(9)**	10	11		
		(3)	**(3)**	**(3)**	**(3)**	3	**(3)**	**(3)**	**(3)**	*7*	**5.**
		4	5	6	7	**(8)**	9	10	11		
			(4)	**(4)**	4	4	4	4	**(4)**	*3*	**8.**
			5	6	**(7)**	**(8)**	**(9)**	**(10)**	11		
				(5)	5	5	5	5	**(5)**	*2*	**9.**
				6	**(7)**	**(8)**	**(9)**	**(10)**	11		
					6	6	6	6	6	*0*	**11.**
					(7)	**(8)**	**(9)**	**(10)**	**(11)**		
						(7)	**(7)**	**(7)**	**(7)**	*9*	**1.**
						8	9	10	11		
							(8)	**(8)**	**(8)**	*8*	**3.**
							9	10	11		
								(9)	**(9)**	*5*	**6.**
								10	11		
									(10)	*4*	**7.**
									11	*1*	**10.**
									SUM	*54*	

Appendix 5: Form no. 5

Criteria (j)										Number of circlets	Criteria ranking
(1)	**(1)**	1	**(1)**	1	1	1	1	1	1	*3*	**9.**
2	3	**(4)**	5	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**		
	(2)	2	**(2)**	**(2)**	2	2	2	**(2)**	2	*4*	**6.**
	3	**(4)**	5	6	**(7)**	**(8)**	**(9)**	10	**(11)**		
		(3)	**(3)**	**(3)**	3	3	3	**(3)**	**(3)**	*5*	**5.**
		4	5	6	**(7)**	**(8)**	**(9)**	10	11		
			(4)	**(4)**	4	4	4	**(4)**	**(4)**	*6*	**4.**
			5	6	**(7)**	**(8)**	**(9)**	10	11		
				5	5	5	5	5	5	*0*	**11.**
				(6)	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**		
					(6)	6	6	6	**(6)**	*4*	**8.**
					7	**(8)**	**(9)**	**(10)**	11		
						(7)	7	**(7)**	**(7)**	*8*	**2.**
						8	**(7)**	10	11		
							8	**(8)**	**(8)**	*8*	**3.**
							(9)	10	11		
								(9)	**(9)**	*10*	**1.**
								10	11		
									(10)	*4*	**7.**
									11	*3*	**10.**
									SUM	*55*	

Appendix 6: Form no. 6

Criteria (j)										Number of circlets	Criteria ranking
1	1	1	1	1	1	1	1	1	1	*0*	**11.**
(2)	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**		
	2	2	**(2)**	2	2	2	2	2	2	*2*	**9.**
	(3)	**(4)**	5	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**		
		3	**(3)**	3	3	3	3	3	3	*3*	**8.**
		(4)	5	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**		
			(4)	**(4)**	**(4)**	**(4)**	**(4)**	**(4)**	**(4)**	*10*	**1.**
			5	6	7	8	9	10	11		
				5	5	5	5	5	5	*1*	**10.**
				(6)	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**		
					6	6	6	6	6	*4*	**7.**
					(7)	**(8)**	**(9)**	**(10)**	**(11)**		
						(7)	7	**(7)**	**(7)**	*8*	**3.**
						8	**(9)**	10	11		
							8	8	**(8)**	*6*	**5.**
							(9)	**(10)**	11		
								(9)	**(9)**	*9*	**2.**
								10	11		
									(10)	*7*	**4.**
									11	*5*	**6.**
									SUM	*55*	

Appendix 7: Form no. 7

Criteria (j)										Number of circlets	Criteria ranking
1	1	1	1	1	1	1	1	1	1	*0*	**11.**
(2)	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**		
	(2)	2	2	2	2	**(2)**	**(2)**	2	**(2)**	*5*	**6.**
	3	**(4)**	**(5)**	**(6)**	**(7)**	8	9	**(10)**	11		
		3	3	3	3	**(3)**	3	3	3	*2*	**9.**
		(4)	**(5)**	**(6)**	**(7)**	8	**(9)**	**(10)**	**(11)**		
			(4)	**(4)**	**(4)**	**(4)**	**(4)**	**(4)**	**(4)**	*10*	**1.**
			5	6	7	8	9	10	11		
				(5)	5	**(5)**	5	5	**(5)**	*6*	**5.**
				6	**(7)**	8	**(9)**	**(10)**	11		
					6	**(6)**	6	6	**(6)**	*5*	**7.**
					(7)	8	**(9)**	**(10)**	11		
						(7)	**(7)**	**(7)**	**(7)**	*10*	**2.**
						8	9	10	11		
							8	8	8	*1*	**10.**
							(9)	**(10)**	**(11)**		
								(9)	**(9)**	*7*	**3.**
								10	11		
									(10)	*7*	**4.**
									11	*3*	**8.**
									SUM	*56*	

Appendix 8: Form no. 8

Criteria (j)										Number of circlets	Criteria ranking
(1)	**(1)**	1	1	**(1)**	**(1)**	**(1)**	**(1)**	**(1)**	**(1)**	*8*	**2.**
2	3	**(4)**	**(5)**	6	7	8	9	10	11		
	2	2	2	2	2	**(2)**	2	**(2)**	2	*2*	**9.**
	(3)	**(4)**	**(5)**	**(6)**	**(7)**	8	**(9)**	10	**(11)**		
		3	3	**(3)**	3	**(3)**	3	**(3)**	3	*4*	**8.**
		(3)	**(4)**	6	**(7)**	8	**(9)**	10	**(11)**		
			4	**(4)**	4	**(4)**	4	**(4)**	4	*6*	**5.**
			(5)	6	**(7)**	8	**(9)**	10	**(11)**		
				(5)	5	**(5)**	5	**(5)**	5	*7*	**3.**
				6	**(7)**	8	**(9)**	10	**(11)**		
					(6)	**(6)**	6	**(6)**	**(6)**	*5*	**6.**
					7	8	**(9)**	10	11		
						(7)	7	**(7)**	**(7)**	*7*	**4.**
						8	**(9)**	10	11		
							8	**(8)**	**(8)**	*2*	**10.**
							(9)	10	11		
								(9)	**(9)**	*9*	**1.**
								10	11		
									10	*0*	**11.**
									(11)	*5*	**7.**
									SUM	*55*	

Appendix 9: Press release

Vyhlášení výsledku obchodní veřejné soutěže

Kasárna Slatina 2010

autor vizualizací: studio SIZA

Dne 26.2.2010 byla společností JIŽNÍ CENTRUM BRNO, a.s. vyhlášena obchodní veřejná soutěž na vyhledání zájemce o areál slatinských kasáren za účelem jeho revitalizace. Soutěžní podmínky vč. časového harmonogramu byly zveřejněny na internetové prezentaci společnosti na adrese http://www.jcbrno.cz a http://www.kasarnaslatina.cz, soutěž byla dále oznámena formou billboardové kampaně, inzerce v tisku a areál slatinských kasáren byl taktéž prezentován na veletrhu investičních příležitostí MIPIM 2010 v Cannes.

Soutěžní podklady si vyzvedlo 6 zájemců, z nichž 3 odevzdali v termínu do 2.4.2010 své soutěžní projekty. Tyto odevzdané soutěžní projekty splnily veškeré formální i obsahové požadavky kladené vyhlašovatelem v soutěžních podmínkách a zástupci soutěžících byli přizváni k soutěžnímu dialogu a následně vyzváni k vyhotovení finální

podoby návrhu smluvních vztahů. V souladu s harmonogramem obchodní veřejné soutěže zasedala dne 11.6.2010 hodnotící komise složená mimo zástupců společnosti JIŽNÍ CENTRUM BRNO, a.s. rovněž ze zástupců městské části Brno-Slatina a odborníků v oblasti urbanismu a architektury. Hodnotící komise vybrala na základě předem stanovených kritérií formou metod a postupů rozhodovací analýzy nejlepší soutěžní projekt obchodní veřejné soutěže Kasárna Slatina 2010, kterým se stal projekt společnosti IMOS development, uzavřený investiční fond, a.s. Představenstvo společnosti JIŽNÍ CENTRUM BRNO, a.s. následně rozhodlo v souladu s doporučením hodnotící komise o nejlepším soutěžním projektu. Dnes, tj. 14.6.2010 bude zahájeno intenzivní jednání se společností IMOS development, uzavřený investiční fond, a.s. směřující k finalizaci a následnému podpisu návrhů smluvních vztahů, které by měly být v případě hladkého průběhu jednání uzavřeny do konce června tohoto roku.

Vybraný soutěžní projekt pojímá řešení areálu slatinských kasáren komplexně, včetně vybudování vnitřních komunikací, kruhového objezdu na křižovatce Hviezdoslavova – Řípská a prodloužení křižovatky Vlárská – Řípská přímo do areálu slatinských kasáren. Tyto komunikace a další vybudované inženýrské sítě zahrnující zejména kanalizaci a veřejné osvětlení budou následně převedeny do majetku města Brna. Investor předpokládá rozdělení revitalizace areálu do čtyř navazujících etap, přičemž zásadní městotvorná část bude dokončena v roce 2014 a celý areál by měl být zrealizován do ledna roku 2019. V přípravné fázi dojde zejména k dekontaminaci areálu a k postupné demolici stávajících objektů, které budou bránit nové výstavbě v jednotlivých etapách, ostatní objekty budou investorovi sloužit jako dočasné zařízení staveniště. V první etapě dojde k výstavbě shora uvedených páteřních komunikací, inženýrských sítí a k vybudování kruhového objezdu a křižovatky ulic Vlárská – Řípská. Následovat bude výstavba objektů s náplní administrativy, obchodů, služeb a kulturních ploch v sousedství kruhového objezdu a rovněž bytových objektů při ulici Řípská, které vytvoří hlukovou bariéru a budou orientovány do vnitrobloku. Tato etapa by měla být zrealizována do léta 2014. V následujících etapách vzniknou zejména plochy zdravotních a sociálních služeb vč. bydlení pro seniory, sportovní hala s venkovními herními plochami, parková zeleň podél železniční trati a další bytová výstavba s oboustranně orientovanými byty.

Projekt nabídne cca 28 000 m^2 ploch pro bydlení, což je přibližně 450 bytů o velikosti 2+kk, a dále cca 800 parkovacích míst. Významná část z celkové plochy areálu bude vyhrazena veřejné zeleni a sportu.

Investor předpokládá realizaci pěti stěžejních funkcí. Obchodně administrativního a společenského centra, sportovní haly, zdravotního střediska s domem pro seniory, rezidenčního bydlení a veřejné zeleně. Obchodní plochy nabídnou dostatečné maloobchodní zázemí pro život téměř dvou tisícovek lidí, kteří zde budou bydlet či pracovat. S tím souvisí i základní služby občanské vybavenosti jako je pošta, banka či čistírna, dále restaurace, kavárna a cukrárna. Administrativní centrum nabídne plochy pro zázemí menších i větších společností, zejména kancelářských prostor, které v dané lokalitě chybí. Sportovní hala nabídne celou řadu pohybových aktivit od squashe až po venkovní tenisové kurty s možností zimního zastřešení. Zdravotní středisko nabídne základní zdravotní péči obvodních, dětských i zubních lékařů, součástí bude rovněž lékárna. Rezidenční bydlení bude nabízet jak startovací byty, tak rodinné bydlení.

Veřejná zeleň nabídne oddychové místo pro relaxaci a odpočinkové zóny.

Celkový finanční přínos pro město Brno je více než 200 mil. Kč. Kupní cena zahrnuje soubor investičních činností, jež běžně realizuje vlastník či developer. Jedná se o dekontaminace, demolice, infrastrukturu nad rámec přímo související s projektem investora, funkční propojení s průmyslovou zónou Černovická terasa, atp.

V Brně dne 14.6.2010

Ing. Jan Zavřel

ředitel společnosti

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